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THE RETROBATES

WHAT IS NINTENDO'S MOST IMPRESSIVE HARDWARE INNOVATION?

DARRAN JONES

It has to be the Wii for me. It was not only successful with non-games, but proved that clever ideas will always trump hyper-realistic visuals.
Expertise: Juggling a gorgeous wife, two beautiful girls and an award-winning magazine, all under one roof!
Currently playing: *Triangle Strategy*
Favourite game of all time: *OutRun 2006: Coast 2 Coast*

TIM EMPEY

The handle on the back of the GameCube. It's never been replicated, and it made carting the console to the games room and back really easy back in the early Noughties.
Expertise: Finishing Game Pass games before they go
Currently playing: *Star Wars Jedi: Survivor*
Favourite game of all time: *God Hand*

NICK THORPE

Definitely single-cart multiplayer, from the GBA onwards. I meet up with friends to play *Mario Kart* regularly, and every time someone inevitably forgets to bring their copy.
Expertise: Owning five Master Systems and a Mark III
Currently playing: *Prince Of Persia* (the 2008 one)
Favourite game of all time: *Sonic The Hedgehog*

ANDY SALTER

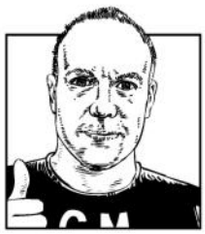
The shoulder buttons, I cannot imagine using a game controller without them now.
Expertise: Modding games, no 'vanilla' versions for me, thanks!
Currently modding: *Fallout 4: Sim Settlement 2*
Favourite game of all time: *Rome: Total War* although I guess it's the *Remastered* edition now

ANDREW FISHER

The dual screens of the Nintendo DS, for creating a wave of innovative games with clever controls.
Expertise: Forty years of gaming, from Commodore 64 to Switch
Currently playing: *Timo's Castle*
Favourite game of all time: *Wizball*

PAUL ROSE

Favourite Nintendo innovation… the two-screen Game & Watch. *Donkey Kong* blew my mind.
Expertise: Winging it
Currently playing: *Baldur's Gate III*
Favourite game of all time: *Half-Life 2*



GRAEME MASON

The GBA SP, especially the backlit model. Just so cool.
Expertise: Adjusting the tape azimuth with a screwdriver
Currently playing: *Botany Manor*
Favourite game of all time: *Resident Evil 4*

RORY MILNE

I know the Game Boy wasn't the first handheld cartridge-based console, but I love it for being the first to play quality games without draining batteries for fun.
Expertise: The game that I'm writing about at the time of writing
Currently playing: *Cadaver*
Favourite game of all time: *Tempest*

IAIN LEE

The Wii Nunchuks for me… blew my mind first time I tried them.
Expertise: Buying expensive stuff on eBay then never touching it
Currently playing: *Little Kitty, Big City...* or rather played it. It's rather short
Favourite game of all time: *Elite* (BBC Model B)

LOADING...

One decent side effect of being old is that I've seen the remarkable transition of Nintendo first hand. I wasn't there for its Hanafuda and Love Hotel days, but I was there to witness its early arcade games and amazing Game & Watch releases, its relatively small splash with the NES (in the UK at least) and its utter dominance during the 16-bit and handheld eras with the SNES and Game Boy respectively. I witnessed the technical brilliance of the N64, loved the Game Boy Advance and was second in line to get a GameCube at my local Game. I championed the Wii and the DS, was amazed by the 3D of the 3DS and was just as baffled as everyone else in the office when the Wii U was finally revealed. I'm still captivated by Nintendo's clever approach to hardware today (I have over 330 physical Switch games in my collection) and am looking forward to the Switch 2 like many other gamers.

So in this special premium issue we celebrate the many gaming innovations of Nintendo and its hardware, from its universal d-pad to misfires like the Virtual Boy and aforementioned Wii U. And if you enjoyed last month's retrospective on *Super Metroid*, you'll no doubt be pleased with our latest 32-page book, which celebrates every one of the iconic bounty hunter's many adventures.

Stay safe and enjoy the magazine.

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Paul Kautz speaks to the creative minds behind Adeline Software's ambitious adventure

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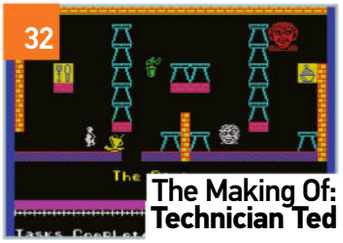
M2 ShotTriggers: Chasing Perfection

The esteemed Japanese developer discusses its popular ShotTriggers series of shoot-'em-ups



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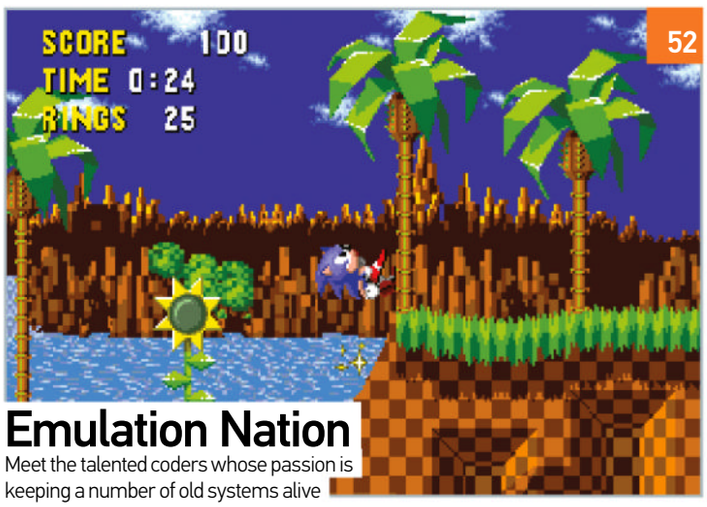

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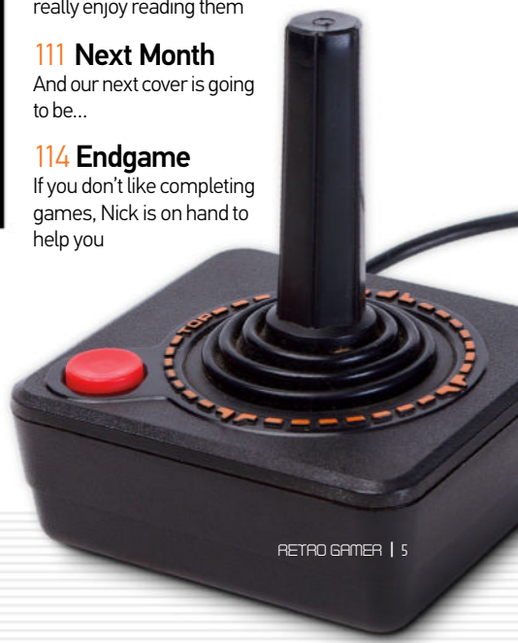
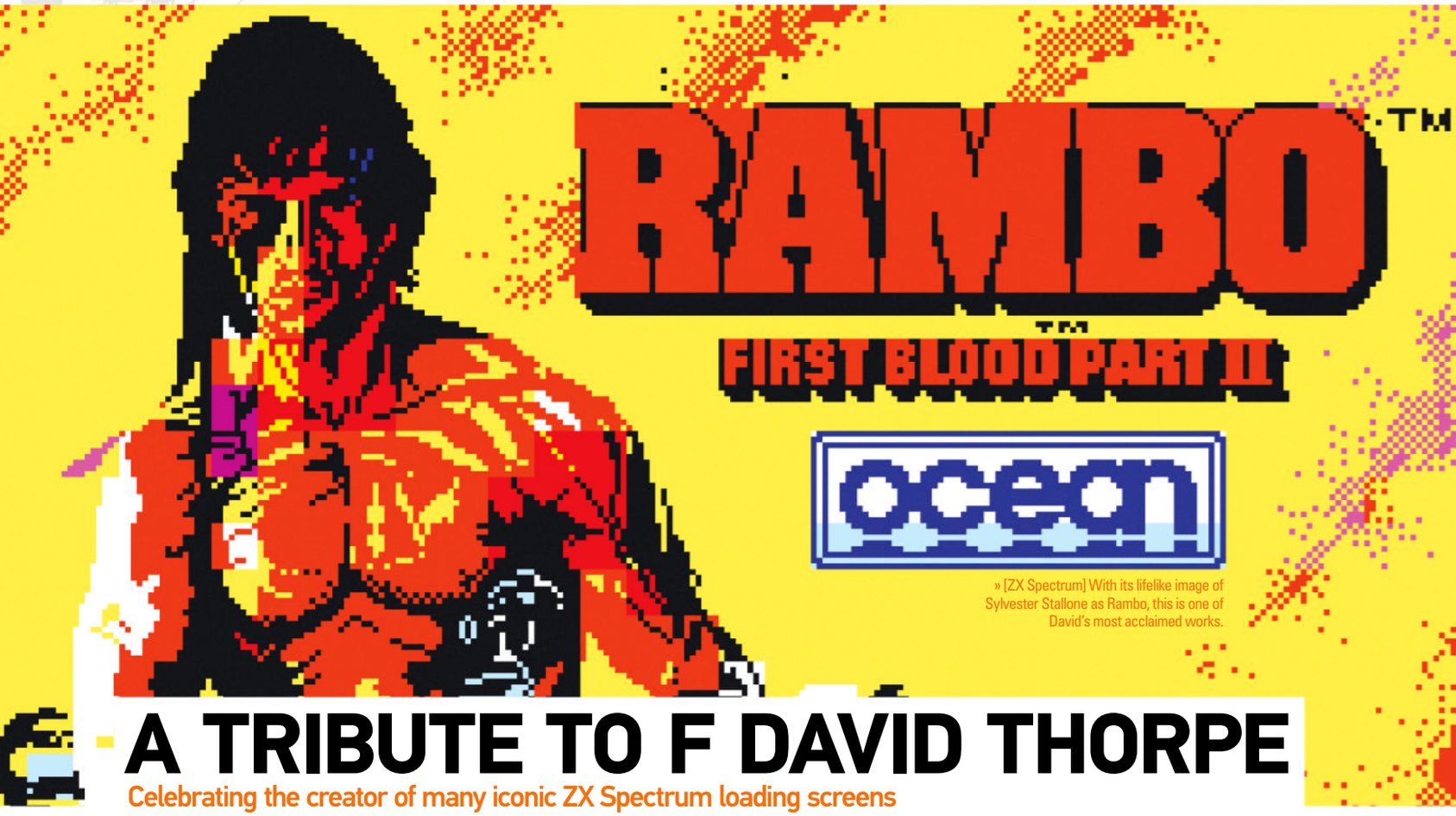
Emulation Nation

Meet the talented coders whose passion is keeping a number of old systems alive





» [ZX Spectrum] With its lifelike image of Sylvester Stallone as Rambo, this is one of David's most acclaimed works.

A TRIBUTE TO F DAVID THORPE

Celebrating the creator of many iconic ZX Spectrum loading screens

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David Crookes revisits the stunning loading screens of the late pixel artist

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More timeline shenanigans as Nick finds himself exploring November 2007

The work of Frederick David Thorpe invariably sticks in the mind of ZX Spectrum gamers. His knack for creating vivid, scene-setting loading screens within the colour limitations of the machine earned him the respect of peers and he would end up creating graphics for some of the biggest names of the day, notably Ocean Software, Imagine and US Gold.

It's with great sadness, then, that we report his passing, on 29 January this year, aged 84. Having become an acclaimed pixel artist late in his career – he worked as an architectural technician, illustrated features for magazines published by Whitehorn Press and created Christmas cards for ICI's pharmaceutical division – he was in his mid-40s when he began playing around with graphics on a BBC Model B.

His decision to purchase a Speccy proved pivotal, however. He told *Crash* magazine in June 1985 that he "soon felt totally at home with it" and he promptly coded a golf simulation game called *Royal Birkdale Championship Golf*. Sold to Ocean, the game had a mixed reaction. *Crash* gave it 47% in May 1984 and *Your Computer* handed it three out of five. But *Home Computing Weekly* awarded it four out of five stars, lavishing particular praise on the loading screen.

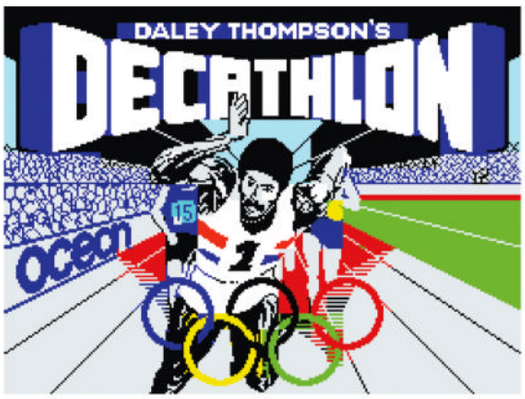
» F David Thorpe when he was interviewed in *Crash* magazine. Image: (Paul Francise).

"The title page is spectacular in colour and definition, with a picture of the club house," the reviewer wrote. "That high standard of graphics is maintained throughout." Indeed, it was thought to be so good that Ocean commissioned many more loading screens from that point on, offering him a freelance role. He ended up producing loading screens for *Batman*, *Bruce Lee*, *Daley Thompson's Decathlon*, *Daley Thompson's Super Test*, *Head Over Heels*, *Hunchback*, *International Match Day*, *Knight Rider*, *Kong Strikes Back*, *Nightmare Rally*, *Rambo: First Blood Part II*, *Roland's Rat Race*, *Street Hawk*, *V* and many more.

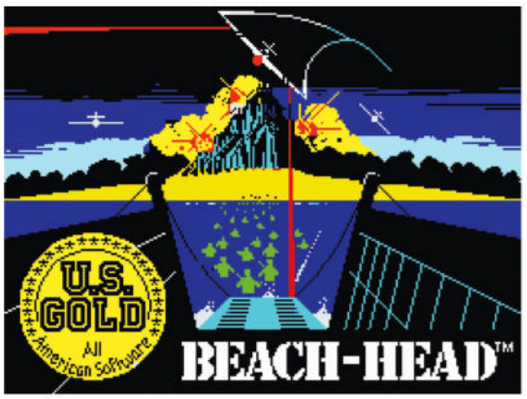
"The first word that springs to mind when thinking about F David Thorpe is 'iconic,'" says fellow Ocean developer Paul Hughes. "Whilst we'll always associate Bob Wakelin with the amazing cover art on Ocean games, Spectrum owners also had the added bonus of David Thorpe's beautiful renditions of Bob's artwork as a loading screen.

"For me, he was the first artist that truly mastered the art

> "He'd draw his loading screens on square paper and use Melbourne Draw to convert them to the Spectrum"



» [ZX Spectrum] David found it difficult to create the intertwining Olympic rings for *Daley Thompson's Decathlon*.



» [ZX Spectrum] After producing screens for Ocean, David quit his day job and worked for other companies such as US Gold.

» [ZX Spectrum] Many of David's loading screens were signed with his name, including this one for *Head Over Heels*.

» [ZX Spectrum] The explosive loading screen of *Spy Hunter* remains one of our favourite pieces by David. It's so full of excitement and energy.

» [ZX Spectrum] Some of the loading screens were directly inspired by Bob Wakelin's box art, with *Hunchback* being a good example.

of Spectrum attributes (just two colours in any one 8x8 square). His screens captured all the nuance of Bob's illustrations, whilst impossibly capturing so much colour with his incredible screen layout skills. As such, his loading screen artwork defined the Spectrum in the early eighties."

David developed his own way of working. He'd draw his loading screens on square paper and use Melbourne Draw to convert them to the Spectrum, a process that would take around 20 hours in total. He said *Daley Thompson's Decathlon* was the most difficult screen to create – the Olympic rings were particularly tricky. His favourite loading screen was *Rambo* which earned him a round of applause from Ocean's bosses. He was certainly highly valued.

Legendary programmer Jim Bagley agrees David's loading screens were special and well regarded while former graphics artist Mark R Jones took to Twitter to express his condolences, saying David had "made many first class loading screens". But his importance went beyond his work. "Although most people knew David for his amazing artwork and graphics, I remember him as a true gentleman who took great pride in his work and always had time for everyone," says Gary Bracey, Ocean's former development director.

As well as producing loading screens for the Spectrum, David created graphics for the Amstrad CPC – notably the colourful *Head Over Heels* and *RAID* images. He also produced the title screen for Thames Television's 1985 technology programme, *4 Computer Buffs*, which aired on Channel 4, and he drew graphics for use in games such as *Short Circuit* on the CPC. He told *Crash* magazine that he'd never had a piece of work rejected and, while he ended up leaving the videogame industry in 1987 and returning to architecture, his impact was felt far and wide.

"The work of David Thorpe has been a great influence on me," says veteran pixel artist Bill Harbison. "Back in the days when I was experimenting with graphics on my ZX Spectrum I was most influenced by the loading screens for the games *Pogo*, *Eskimo Eddie* and *Daley Thompson's Decathlon*. They made me decide to buy the professional art tool, The Artist 2, and begin composing full-screen images instead of just smaller sprite-sized graphics.

"It took many hours of studying David's screens in order to learn how to hide colour clash and do shading while still making the final image look uncluttered and so many of his images are burned into my memory. I think my favourite has to be *Nightmare Rally*. No, *Head Over Heels*. No, actually I think it's *Rambo*. Looking through his portfolio I still can't decide: *Roland's Rat Race* was great wasn't it? You see the problem? They were all great!" Our thoughts go out to David's friends and family. ✱

» [ZX Spectrum] David said his architectural background helped him to create his artwork.

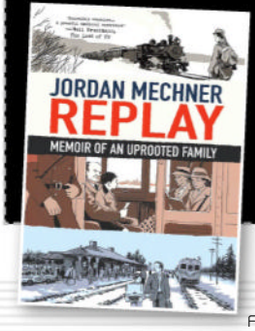
» [ZX Spectrum] This was David's first ever loading screen and it caught the eye of Ocean's bosses.

MORE NIGHTMARES

A 232-page book celebrating the weirdest, toughest and worst Commodore 64 games is set to be released in August following a highly successful Kickstarter. Called *64 Nightmares*, the book's been written by our homebrew expert Andrew Fisher. Published by Fusion Retro Books, it discusses loathsome licences, games that were deliberately made difficult and decisions that were downright odd. More info at fusionretrobooks.com

MECHNER MEMOIRS

Famed game designer, Jordan Mechner, creator of *Karateka* and the *Prince Of Persia* franchise, has written and illustrated a graphic novel which explores how his family escaped Nazi persecution in 1938. The 320-page hardcover book, *Replay: Memoir Of An Uprooted Family*, interweaves the compelling story with his own history as a game developer, making for a unique book that is already winning awards. Check it out at jordanmechner.com



Who is Iain Lee?
Iain Lee is a freelance counsellor who loves gaming, particularly retro gaming. You can get more information about Iain by visiting iainleecounselling.com or heading over to patreon.com/iainandKatherine

Wilt Disné

On the island of Zakynthos they have a town square. It's dead in the daytime and only comes to life after 9.00pm. It's rich with the smell of food being cooked in the open, children running around laughing and screaming, and 'rides'. By rides I mean little cars for eight year olds to drive around in (and yes, it's as safe as that sounds), teacups and other rather poor activities. What's interesting about these rides is it would seem the barkers and hustlers have all managed to get the Disney licence! All of these deathtraps are covered in Mickey, Pluto, Minions and even a few Pokémon. These people can't make more than a few quid a night and I assume to get the rights to use these characters must cost a fortune. Or maybe they've just nicked the images thinking no one from the Disney Corporation is ever going to see them and decide to sue them.

It reminds me of the early days of computer games. There were so many copies and fudges of famous brands. One that immediately springs to mind for me is a game that appeared on the BBC. *Snapper* was a spot-on *Pac-Man* clone. While the protagonist might look like a testicle, everything else is absolutely bob-on. The noise, the maze, the feel. And it was released by Acornsoft, a company that one would think should know better.

Back in the early Eighties I never questioned these games. It's only in the last few years I've looked back and wondered how they were ever allowed. Sure, those days were the Wild West, but even still, it's mind-blowing. There were some that got in trouble. The most famous being *The Great Giana Sisters*. This was *Super Mario Bros* in all but name. The mistake Time Warp Productions made was messing with Nintendo, a company so litigious that even if you swear whilst playing one of its games, you're likely to get a cease and desist.

Another early example of a rip-off that got its fingers burnt was *Donkey King* on the Dragon 32. A *Donkey Kong* clone that also fiddled with Nintendo property. Microdeal had to change the name to *The King*, although it was still allowed to release it which is a huge head scratcher for me. Why wasn't the whole production shut down?

And if *The King* and *The Great Giana Sisters* got letters from Japan, how the hell did *Killer Gorilla* on the BBC get away with it? It opens with the phrase "How high can you try?" before launching into… well… it's *Donkey Kong*. It is totally *Donkey Kong*.

The equivalent today would be me making an open-world game where you stole cars and used indoor language freely and called it *Magnificent Pilfering Voiture*. I suspect the bods at Rockstar would shut me down pretty sharpish.

I'm obsessed with these licence-dodging rip-offs. There must be hundreds I've never seen. If you know of any that you particularly enjoyed, please let me know at iain@iainlee.com and maybe I'll cover them in the future.

Anyway, must dash. I'm launching my own magazine called *Nostalgic Player*. *

> "How the hell did Killer Gorilla on the BBC get away with it?"

Do you agree with Iain's thoughts? Contact us at:

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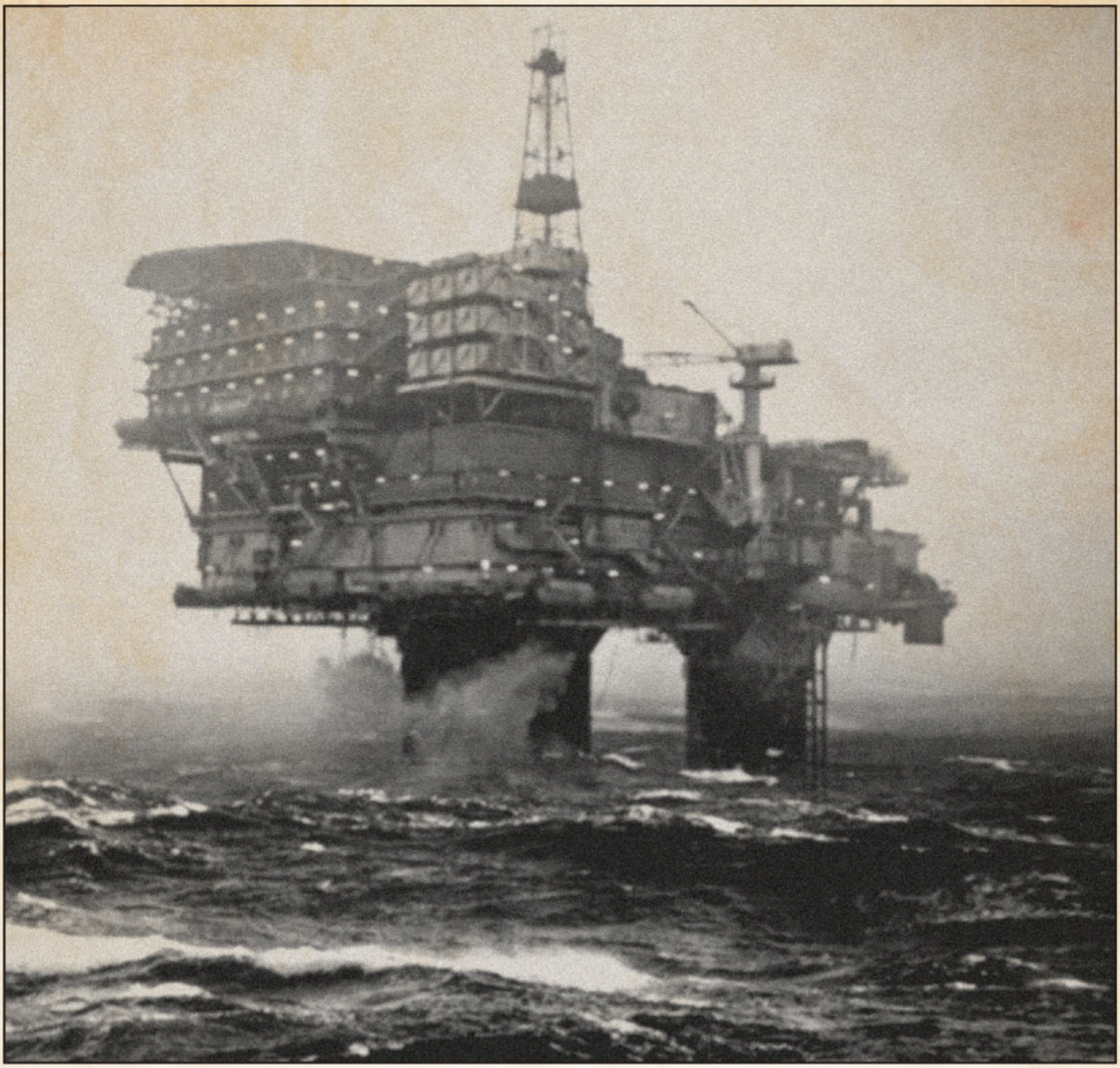

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Who is Paul Rose?
Paul is probably better known as Mr Biffo – the creator of legendary teletext games magazine *Digitiser*. These days, he mostly writes his videogame ramblings over at Digitiser2000.com. If you want more Biffo in your eyes, you can catch him as the host of *Digitizer The Show* at www.bit.ly/biffo2000.

Made for TV?

Like many of you, as of writing this I've just finished watching *Fallout* on Amazon Prime. It is a brilliant show, and the first time any game adaptation has made me feel the way I do when playing a game. Not only is it incredibly loyal to the long-running franchise – I was there in 1997 when the first one came out – but it understands games in a way no other TV show or movie ever has.

Take the recent animated *The Super Mario Bros Movie*; that just felt to me like a bunch of cutscenes. There was no sense that this was gameplay brought to life. *The Last Of Us* adaptation was great, but that series always had aspirations to be more movie than game anyway. It got me wondering about other games from the past, and which ones might make good TV adaptations.

My mind first went to *Skool Daze* – one of my formative games. It immediately feels ripe for adaptation, because of its cast of characters. You've got a cheeky underdog protagonist in Eric, antagonists in Angelface and Einstein, an ally in Boy Wander, while the teachers act as the ultimate authority figures. Heck, you've even got a jeopardy baked into the drama, with Eric trying to get his report card back from the headmaster's safe. It'd be a heist movie set in a British school, like *Ocean's 11* – but with kids!

Elite feels like another obvious one. Commander Jameson is a down-on-his-luck trader, struggling to make his way in the galaxy. He begins a respectable businessman, but the galaxy doesn't reward him for it. Gradually, to make ends meet, he falls into a life of crime – bounty hunting gives way to piracy, and with it come the rewards… better weapons, a faster ship… but also unwanted attention from police and rivals. Epic space dogfights. Give me this now.

Then I've tried wondering how you might adapt less obvious examples. What about *Jet Set Willy*? A regular working class guy becomes a millionaire overnight. After a party to celebrate his fortune, he wakes up with the mother of all hangovers, to find his brand-new mansion trashed. He just wants to sleep it off, but his fearsome housekeeper Maria is refusing to clean up – and so Willy has to take on the task himself. In his sleep-deprived state, the mansion becomes a surreal hellscape – shades of *Naked Lunch*, or Hunter S Thompson. Trippy visuals, ordinary rooms turning into nightmarish landscapes, full of horrors. It can be a commentary on wealth and capitalism, as his fortune becomes as much a curse. Or something.

Jumping forwards to the Nineties, and using a similar alternate history format to *Fallout*, what about *Command & Conquer: Red Alert*? Set in an alternate Fifties, inadvertently created by Albert Einstein through his time-travel shenanigans. A resurgent Soviet Union has spread across the globe – but European allies have started pushing back, throwing the continent into all-out war. You've even got a main character in special-ops civilian commando Tanya Adams. Send her on a mission across war-torn Europe to rescue Einstein from Soviet clutches, and you've got your series arc.

Now that TV people have finally figured out how to make proper game adaptations, and – after the success of *Fallout* – will no doubt be scrambling to find the next big hit, can any of the above ideas really be out of the question? *

> "Skool Daze immediately feels ripe for adaptation, because of its cast of characters"

Do you agree with Paul's thoughts? Contact us at:
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» Retro Computer Museum's Andy Spencer has run the popular charity since 2008.

» Visitors to the museum can now relax in its awesome arcade.

Retro Computer Museum

Retro Gamer catches up with Andy Spencer, the man behind Leicester's fantastic retro-gaming museum

Since 2008, the Retro Computer Museum, nestled in the heart of England, has been serving as a dedicated hub for retro gamers and computer enthusiasts. Having recently moved to newer, larger premises, the museum now offers an even more relaxed and informative experience, with obscure systems, games, literature and retro-gaming history all waiting to be discovered.

How did the Retro Computer Museum come about?

The original idea was to share my collection. I had around a dozen systems – including a Dragon 32 I'd picked up for 99p – so I created a website to show them off. But it was terrible, so I got a friend to do a better one while another made the 'jester' logo. It also had a forum, and within a few weeks, people from other forums were visiting. More and more people joined, so we thought of putting on a little event at our local village hall. We didn't expect anyone to come – but 70 people turned up. This led to a second event, and we began to get stuff donated.

Where did you store it all?

Eventually, it got too much for my garage, so we hired a room in an old shoe factory in Earl Shilton, just west of Leicester. Of course, within twelve months, we ran out of room again and ended up with another four rooms there. We finally opened to the public when we moved to Heather and began doing events at Snibston.

The museum is a registered charity – how difficult was it to gain that status?

We had to make up a committee for the process, which took about six to twelve months. It wasn't difficult, just time-consuming. We

> "The idea was to make people smile, reminisce and teach the next generation how good our kit was"
>
> **ANDY SPENCER**

» The Retro Computer Museum has now moved to Leicestershire.

» The core of RCM's mission is to show off old computers and consoles.

» If you need somewhere to chill out while visiting, the library is the perfect spot.

never made lots of money – that wasn't the idea. The idea was to make people smile, reminisce and teach the next generation how good our kit was.

Can you tell us about your recent move and what the museum contains today?

After we moved to Leicester and became a charity, we quickly ran out of room again, and now we've got four units: a storage unit, a separate arcade, the main area and a recording studio. There's also a workshop. The main area houses all the kit, and upstairs is the library. That holds our collection of computing and gaming magazines and games. There are well over 40,000 games, plus magazines, books and other things like LaserDiscs.

What's in the arcade?

We've got four VR machines now, four sit-down driving cabs, a pinball table, a Neo Geo and various other arcade machines. We've also got one of the Nintendo Playchoice 10s, which Rare's Pete Cox kindly donated. It actually came from Rare.

And a studio, too?

During lockdown, we asked all our friends worldwide if they'd create some music, and the response was overwhelming. We created an album called *Blank Canvas*, and now the idea is that local people or anybody can come and hire this studio. We've got a digital and standard drum set, guitars, synths and computers. There's an Atari ST in there – anything that's MIDI-based or we can use to get a sound out of, we can put in there. Even a ZX Spectrum!

When is the museum open?

Every weekend. It's not open during the week except for private bookings such as school visits, birthday parties, and so on. But the regular core hours are 10.00am until 3.30pm on Saturdays and Sundays.

Tell us about these 'legendary, world-famous' gatherings.

It was just a bit tongue in cheek, but it's sort of stuck now, and we do actually have friends all over the world – at the last event, one guy travelled for 27 hours to be there! We get a lot of famous people at these, and you get to bump into some fantastic people. We had 160 people at the last one, but this new venue is a game-changer, and we're hoping to get 200 at the next.

Keeping the museum running must take a lot of dedication and support.

Oh yeah, I can't do it myself – without the committee and the volunteers who are all wonderful we simply couldn't run. Basically, it's a family team.

Do you have any events planned for the future?

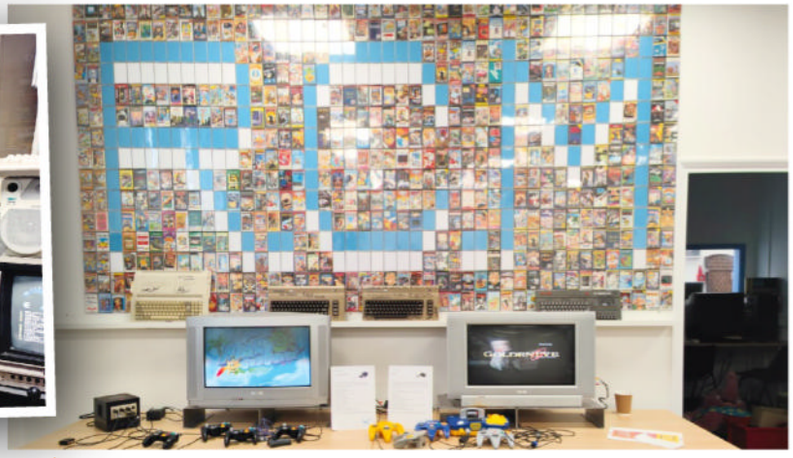
We will have a special event room, and the plan is to first have a Sam Coupe event. We're going to empty the room of our normal kit and have a room full of Sam Coupes! We have three working ones of our own, and other people are bringing theirs. I can't imagine there will have ever been as many working Sam Coupes in one place. The general idea is just to show off these old machines again, so we could have some Vectrexes, Spectrums or a load of ZX81s. We've got so many things we want to do.

Who maintains the machines?

We all chip in. As I said, we have a workshop and people who assist from outside the team. We may even start a kit repair service – as usual, it all comes down to time and money.

Our thanks to Andy for his precious time. If you want to learn more about the Retro Computer Museum and keep abreast of upcoming events, visit the website retrocomputermuseum.co.uk

» RCM's famous mosaic-style wall of cassettes, from its old home…



» …to its new.

BACK TO THE NOUGHTIES

NOVEMBER 2007 – Samus Aran brings joy to Wii owners, Microsoft launches its big Christmas offensive and Lair's gameplay just proves to be offensive. Take another trip to the past, and for some reason we've entrusted Nick Thorpe with your boarding passes.

» [Xbox 360] *Halo 3* was just a little bit of a big deal, selling a whopping 14.5 million copies.

NEWS NOVEMBER 2007

Members of The Writers Guild Of America began a strike on 5 November, comprising some 12,000 film and TV screenwriters. TV shows such as *24* and *Battlestar Galactica* were postponed, while others including *30 Rock*, *CSI*, *Family Guy* and *Prison Break* aired shortened seasons. TV networks responded by ordering additional episodes of reality shows such as *Big Brother* and *The Amazing Race*, though viewership declined 6.8% until the strike ended in February 2008.

The final Eurostar services from Waterloo International departed on 13 November, just one day shy of the 13th anniversary of the first departure. On 14 November, St Pancras International opened as the new London terminus for the Eurostar service, following an £800 million rebuild and the completion of the High Speed 1 line. The move was designed to improve Eurostar journey times and relieve pressure for domestic trains on the busy lines into Waterloo station.

Renowned daredevil Evel Knievel passed away at the age of 69 on 30 November. After starting as a rodeo performer, Knievel became famous in the Sixties for performing motorbike jumps, including record-breaking successes and bone-breaking failures.

THE LATEST NEWS FROM NOVEMBER 2007

Going into the crucial Christmas shopping period, every console manufacturer hoped to tempt console buyers with some exclusive games, and Microsoft certainly had a potent pair on hand for the Xbox 360. *Halo 3* continued Bungie's first-person shooter franchise in fine fashion, earning 10/10 from *Edge*, and 5/5 in *360* and 9/10 each from *X360*, *games™* and *Official Xbox 360 Magazine*. Curiously, *OXM* felt that, "*Halo 3* won't live in the memory as an all-time classic, mainly because it doesn't push the boundaries of what next-gen gaming can achieve," while *games™* felt that the game "ends with a whimper". But *Edge* neatly summarised the overall critical consensus, stating that, "In substance it's nothing new, merely a magnificent, beautiful monster of an FPS sequel. In concept and execution… *Halo 3* is the future."

Project Gotham Racing 4 also impressed, scoring 10/10 in *OXM* which felt that, "Every criticism we made of *Gotham 3* has been rectified." The game scored 8/10 in *games™* and *X360*, both of which expressed wonder as to the future direction of the series, with the former suggesting, "That tracks, music and vehicles all make it over unchanged suggests a creative block at Bizarre." Other scores included 9/10 from *Edge* and 4/5 from *360*. Xbox 360 owners could also enjoy a belated port of *Virtua Fighter 5*, featuring online play that wasn't available on PS3 – enough to earn it 9/10 in *OXM* and *X360*, and 4/5 in *360*.

There were also some great multiplatform games on the HD consoles this month. EA's *Skate* turned heads, scoring 9/10 in *X360*, *games™* and *OPM*, 86% in *Play*, 8/10 in *Edge* and *OXM* and 3/5 in *360*. *Play* summarised the mood well, saying "nothing comes easily and at first it can be a little frustrating, especially if you're coming from a *Tony Hawk's* background where any of the basics virtually work themselves", but that this made for a "tough, but highly rewarding experience". *Sega Rally* scored 9/10 in *X360*, which felt it to be, "Simple on the surface, yet with almost endless

» [Xbox 360] Worries about the future of *Project Gotham Racing* proved unfounded, as this was the last one.

replay value," and 7/10 in *Official PlayStation Magazine*, which criticised a mid-game difficulty spike. Other scores included 9/10 from *OXM*, 4/5 in *360*, 8/10 in *games™* and 7/10 in *Edge*.

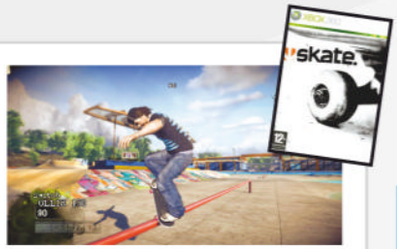
Those games would have been particularly welcomed by PS3 owners, as the heavily hyped exclusive *Lair* failed to live up to expectations. The game scored 3/10 in *games™* and *Edge*, the latter of which asked, "How could you possibly mess up a game in which you ride a dragon?" The answer was apparently to saddle it with poor motion controls, while *games™* complained of infuriating stealth gameplay.

Speaking of motion controls, if Wii owners felt left out of the bonanza above, they at least had the excellent and exclusive *Metroid Prime 3: Corruption* to play. *Official Nintendo Magazine* gave it 94%, praising the "spot-on" controls and challenge, *nRevolution* gave it 9.3/10 and felt that it was "better-paced than before", while the 9/10 review in *games™* highlighted the "intricately designed puzzles" and "cinema-worthy art direction". *Edge* was less impressed, giving it 7/10 and lamenting an introduction that lacked the "awesome loneliness and creeping fear" of previous *Metroid* games.

Handheld owners suffered a rather quiet month, but PC gamers had a couple of very good games all to themselves. The class-based, objective-chasing gameplay of *Enemy Territory: Quake Wars* recalled that of *Wolfenstein: Enemy Territory*, which scored 8/10 in both *games™* and *Edge*, the former saying that it was "a tactical affair that leaves budding Rambos where they'd undoubtedly end up: lying lifeless in the gutter". *PC Gamer* gave it 88%, praising the way that, "Even selfish play should end up rewarding the team as a whole."

The alternate history World War III real-time strategy game *World In Conflict* also scored 88% in *PC Gamer*, being described as "a game that shares the brains of *Total War* with the pace of *Battlefield*". In a 9/10 review, *games™* praised it as "one of the few titles that will appeal to many gamers that aren't typically real-time strategy fans". *Edge* gave the game 8/10, but criticised the "complete lack of tactical proficiency" of AI foes and recommended players stick to online multiplayer.

We've got *Mario*, *Call Of Duty* and *The Orange Box* in the magazines next month – you won't want to miss it. ✱



» [Xbox 360] With the *Tony Hawk's Pro Skater* series looking tired, *Skate* ushered in a new generation of extreme sports games.

» [PC] Hack the thing, and make it quick – the enemy forces are very nearly on top of you.

» [PlayStation 3] If we were forum posters in 2007, we'd probably say, "Sixaxis? More like Sux-axis, lol."

» [Wii] *ONM* declared that "the drought of truly decent Wii titles is over" thanks to *Metroid Prime 3: Corruption*.

CHARTS

NOVEMBER 2007

XBOX 360

1 – **BioShock** (2K Games)
2 – **Tiger Woods PGA Tour 08** (EA)
3 – **Blue Dragon** (Microsoft)
4 – **Stuntman: Ignition** (THQ)
5 – **MotoGP 07** (THQ)

WII

1 – **Big Brain Academy: Wii Degree** (Nintendo)
2 – **Mario Party 8** (Nintendo)
3 – **Tiger Woods PGA Tour 08** (EA)
4 – **Wii Play** (Nintendo)
5 – **Boogie** (EA)

PC

1 – **BioShock** (2K Games)
2 – **Medieval II: Total War Kingdoms** (Sega)
3 – **Guild Wars: Eye Of The North** (NCsoft)
4 – **Medieval II: Total War** (Sega)
5 – **Command & Conquer 3: Tiberium Wars** (EA)

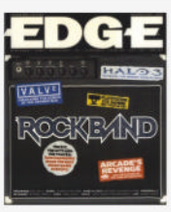
MUSIC

1 – **Bleeding Love** (Leona Lewis)
2 – **Rule The World** (Take That)
3 – **Apologize** (Timbaland ft. One Republic)
4 – **Valerie** (Mark Ronson ft. Amy Winehouse)
5 – **Home** (Westlife)

THIS MONTH IN...

Official Nintendo Magazine

Mario and Sonic might be teaming up in the spirit of friendly Olympic competition, but old habits do die hard. Sonic's 9.666 second sprint time earns the screenshot caption, "You heard it here first, folks. Sonic = Beelzebub."



Edge

Sony has started pushing casual PS3 games like *Singstar* and *Buzz*, prompting *Edge* to ask, "When games of this ilk don't really demand PS3-scale grunt, will their potential audience really be eager to migrate to the £425 platform?"

nRevolution

"We have several of the best emulation coders in the world working on these projects," says Alten8 CEO Paul Andrews, regarding newly announced Spectrum and C64 compilations for the DS. Neither of them ultimately arrived.

1UP
HI-S
K

Yie Ar Kung-Fu

THE DOWNFALL OF A KUNG-FU MASTER

» **AMSTRAD CPC** » **1985** » **IMAGINE SOFTWARE**

When you were a cash-strapped youngster, compilations were a great way to boost your collection. I had a huge number of these back in the day and it pains me to think they were thrown out into a skip many moons ago. One of my favourites was *The Magnificent Seven*, which included a number of excellent Ocean Software games as well as some great arcade conversions by its Imagine Software label.

Yie Ar Kung-Fu was one of my most-played games from the compilation and amazingly, it was included as a freebie. It meant the name of the compilation itself didn't really make much sense but it did get a lot of play and I became quite good at it. In fact, I became so good at it that I eventually had to stop playing it, because what started off as an exciting adaptation of the arcade game, became something of a chore to play.

If you've never experienced it before, *Yie Ar Kung-Fu* requires you to take on a number of different opponents, many of them named after the weapons they're skilled with. It was fairly innovative on release being one of the earliest one-on-one fighters to include weapons, female opponents and energy bars and it also had a number of solid conversions to its name.

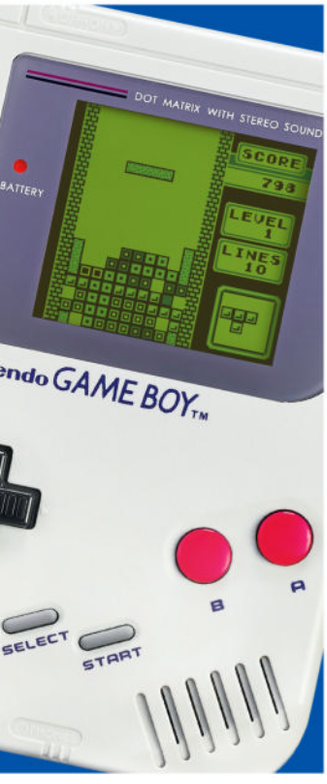
I feel that the Amstrad version is a particularly good one and I'd often play it with my friends. It was good fun seeing how far we could get against the computer opponents and I remember how exciting it felt when we got to Blues, the game's final boss. That wasn't enough though and we soon started a competition to see how many times we could loop the game and beat him. It got to a point where my friends wouldn't play against me, and the AI offered no challenge so I eventually just stopped playing the game.

My mad skills have long since abandoned me (Pole is as far as I can now get) but at the time it did remind me that it is possible to have too much of a good thing. ✱

NINTENDO'S ICONIC HARDWARE INNOVATIONS

FOR DECADES, NINTENDO HAS CONSTANTLY SOUGHT TO RESHAPE THE POSSIBILITIES OF VIDEOGAMES AND EVEN THE WAYS IN WHICH WE INTERACT WITH THEM. JOIN US FOR A LOOK BACK AT NINTENDO'S TECHNOLOGICAL ADVANCES, AND THE HIGHS AND LOWS THAT CAME WITH THEM

WORDS BY NICK THORPE



Whether or not you're a fan of Nintendo's products, it's impossible to deny its influence on the design of home videogames. Time and again, the company has introduced new design concepts that have become commonplace – and just as frequently, it has popularised technologies that had previously been tried to no avail. Thanks to its lengthy tenure in the business, it's arguable that Nintendo has done more to push the videogame console forward than any other manufacturer.

Prior to its transformation into the company we know today, Nintendo was making toys like the Ultra Hand and arcade games such as *EVR Race*. Key employees including Genyo Takeda, Masayuki Uemura and Gunpei Yokoi were hired in this era, and they carried the inventive nature required for those industries with them as Nintendo started exploring videogames. Since Nintendo initially lacked experience with electronics, its first home consoles, the Color TV Game line, were co-created with Mitsubishi. In 1980, the Game & Watch range of dedicated handheld LCD games was introduced, and in 1981 a Game & Watch adaptation of Nintendo's wildly popular arcade game *Donkey Kong* was created. In order to fit the four-way movement of the arcade game into a clamshell body, the cross-shaped directional pad was invented to replace the joystick.

Success with arcade and handheld games led to the development of the Famicom, launched in 1983. Arguably the greatest hardware legacy of the console is its controller, which incorporated the d-pad and became the template others followed – the basic shape and layout were still being borrowed by competitors as late as the Amstrad GX4000 in 1990. That layout followed to international markets with the NES in 1985, now without the hardwired design and microphone on the second controller. The NES also included the 10NES chip – a protection measure designed to block unauthorised software from running on the console, as well as provide region locking. This wasn't so popular with players, but Nintendo felt the innovation necessary to protect its business model in the wake of the North American videogame market crash of 1983.

Nintendo soon started to experiment with alternative game distribution methods with the introduction of the Famicom Disk System. As well as storing more than the typical cartridges of the time, the floppy disks offered space for save data and could be rewritten with new games at special kiosks, for a lower price. Another innovation, battery-backed save RAM, solved the problem of saving when games like *The Legend Of Zelda* were converted to cartridge format for the NES. The add-on was moderately successful, prompting a variety of similar initiatives over the years, including the Japan-only rewritable Nintendo Power flash cartridges for the SNES and Game Boy, and the ill-fated 64DD add-on for the N64.

» The Famicom's second controller had a microphone instead of Start and Select buttons.

» The first Nintendo home consoles were the dedicated Color TV Game units, manufactured by Mitsubishi.

» [NES] Without mapper chips, games like *Kirby's Adventure* would have been impossible to create.

What ultimately rendered the Famicom Disk System obsolete, apart from a piracy problem, was chips known as Memory Management Controllers (commonly called 'mappers') that allowed for bank-switching and extra features. Enhancement chips had been used in game cartridges before, like *Pitfall II* on the Atari 2600, but these became commonplace on the Famicom and NES. "They could change them for the specific game, which was really really useful," says Alastair Low, developer of NES games *Flea!* and *Tapeworm Disco Puzzle*. These allowed the 8-bit consoles to be pushed past their theoretical limits and remain relevant throughout the Eighties and into the early Nineties, leading to sales of almost 62 million consoles globally.

Today, Nintendo is well known for its attempts to choose the most appropriate hardware, rather than the most powerful. A great early example of that was the Game Boy. The point has often been made that the hardware was less advanced than that found in the Lynx and the Game Gear, and consequently cheaper and less power-hungry, but it's often forgotten that it was still an impressive machine in its own right. Writing in *Computer & Video Games* issue 93, Jaz Rignall said that "the Game Boy makes previous handheld games look Neanderthal by comparison" with "amazingly sharp graphics" and "glorious stereo" sound.

Still, those comparisons with other handheld consoles were unavoidable. "With the Lynx, I think the software ultimately was an issue for it. But the Game Gear didn't suffer with that, it actually had some phenomenal

ROB O'FARRELL
Dovetail Games, formerly EA and Probe.

ALASTAIR LOW
Lowtek Games.

PAUL MURPHY
Ninty Media.

Some hardware images and peripherals courtesy of Evan Amos

» The Famicom 3D System shows that stereoscopic 3D is a white whale that Nintendo has chased for decades.

games and most of my friends that were a little bit more well off than I was had the Game Gear," remembers Paul Murphy of Ninty Media, whose family picked the Game Boy over its full colour rivals. "They all laughed but ultimately I had the last laugh, because their system was discontinued and we carried on getting fantastic experiences."

New hardware frequently augmented those experiences. The Super Game Boy allowed the SNES to play handheld games with a splash of colour, while the Game Boy Camera turned the portable into a rudimentary digital camera – and the Game Boy Printer gave you the chance to immortalise your handiwork in sticker form. The Transfer Pak even allowed you to import data into N64 games, with *Pokémon Stadium* being the most memorable use. Even when the Game Boy Color superseded the original machine in 1998, it featured special palettes designed specifically for certain cartridges.

BEHIND THE TIMES

NINTENDO DOESN'T ALWAYS DRIVE GAMING HARDWARE FORWARD, AS EVIDENCED BY THESE TECHNOLOGIES IT WAS FRUSTRATINGLY RETICENT TO ADOPT

N64
OPTICAL DISCS

It's arguable that the SNES CD-ROM drive was a misbegotten concept that was better left unreleased. However, sticking to cartridges cost the N64 the Japanese RPGs that the SNES thrived on, as developers who were hungry for the high capacity that discs offered flocked to the PlayStation and Saturn instead.

GAME BOY ADVANCE
ILLUMINATED DISPLAYS

Maddeningly, Nintendo released the backlit Game Boy Light in Japan in 1998, but failed to add any lighting to the Game Boy Color or Game Boy Advance. Hardware costs may have increased, but as the popular Afterburner kit proved, players would happily shell out extra to render their games visible.

GAMECUBE
ONLINE GAMING

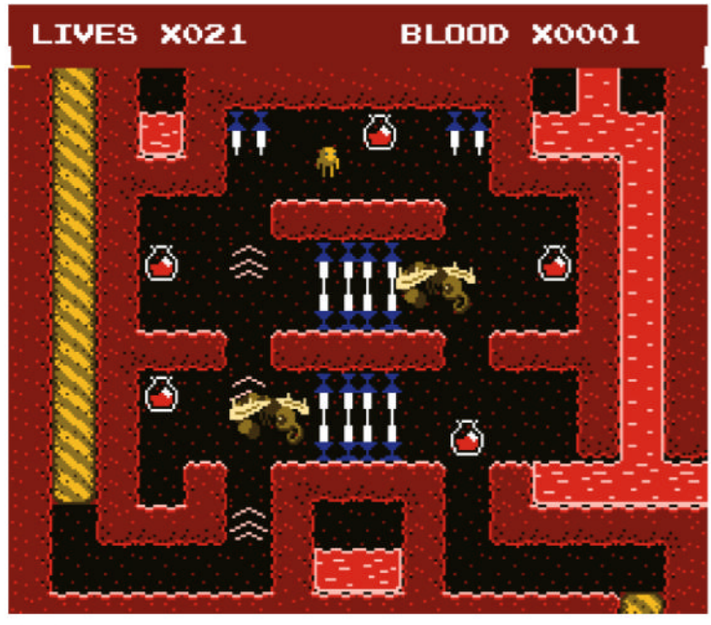
Despite supporting both dial-up and broadband, you could count the GameCube games with internet support on one hand. Things have improved in the years since, but Nintendo's insistence on using friend codes and refusal to integrate voice chat features has ensured that the company's online offerings *still* trail the competition.

WII
HDMI OUTPUT

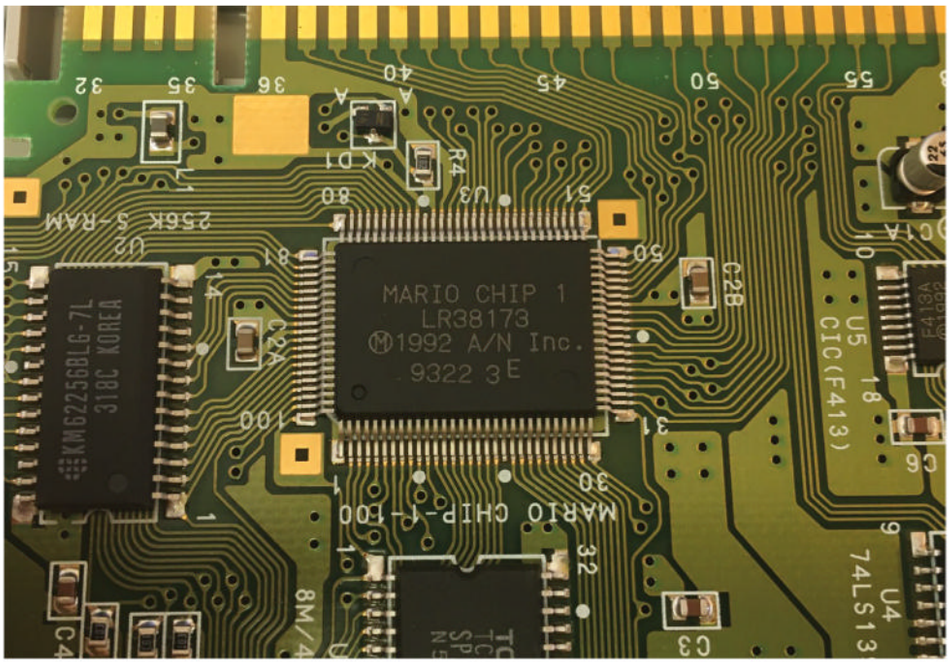
To be clear, sticking to standard definition analogue outputs for the Wii was fine in 2006. However, when the revised Wii Family Edition and Wii Mini came along in 2011 and 2012 respectively, the HDMI connector was well established and would have been appreciated, even if the output was only 480p.

» We'll bet that for many of you, this was the camera that took your first selfie.

In contrast to the Game Boy, Nintendo wanted the SNES to be as powerful as possible thanks to competition from the PC Engine and Mega Drive. The most impressive distinguishing feature was its ability to rotate and scale backgrounds using Mode 7, an effect not possible on any rival system. "*Super Mario World* was the first thing that I saw it in and obviously, the magazines didn't really do justice," says Paul, who cites *Super Probotector*, *Pilotwings* and *Super Tennis* as other Mode 7 favourites. The system's audio chip was also impressive using digital samples rather than FM synthesis. Nintendo's success has often come from picking the right partners, and the chip was engineered by future PlayStation architect Ken Kutaragi at Sony.



» [NES] Alastair Low has developed multiple NES games, including *Flea!* and *Tapeworm Disco Puzzle*.



» This is the humble Super FX chip – or MARIO, as it's more formally known.

» [SNES] Games like *Super Punch-Out!!* were only released in Japan via the Nintendo Power flash cart service.

» [Game Boy] Often, clarity beat detail due to the ghosting effects of the Game Boy's LCD display.

» [Game Boy] Shrewd technical design and universally appealing software made the Game Boy a success.

Another key partner was Argonaut. The British developer had privately demonstrated its ability to coax 3D visuals from the NES and Game Boy, so Nintendo contracted it to design a chip that would assist the SNES in doing the same. "They were really pushing the Super FX chip, because obviously it enhanced and made up for the shortfalls that the SNES did actually have, with the processor being so underpowered," says Paul. "I remember going into Future Zone, at the back they had this wall of CRTs that were playing a massive demo of *Starwing* for months. I don't remember seeing that level of marketing for Nintendo before." Fellow British studio Rare pioneered pre-rendered 3D on consoles for Nintendo with *Donkey Kong Country*, extending the life of the console in the face of impending competition from 32-bit machines.

> "THEY WERE REALLY PUSHING THE SUPER FX CHIP, BECAUSE OBVIOUSLY IT ENHANCED AND MADE UP FOR THE SHORTFALLS THAT THE SNES DID ACTUALLY HAVE, WITH THE PROCESSOR BEING SO UNDERPOWERED"
> **PAUL MURPHY**

The SNES wasn't as successful as the NES but still wound up as market leader, so Nintendo chose to favour power again with the Nintendo 64, which launched in 1996. The choice to use cartridges was divisive, though Alastair notes "there was much less could go wrong with an N64 cartridge" in comparison to CD-ROMs, but the hardware from Silicon Graphics, Inc was fantastic at 3D, with perspective correction and texture filtering that made its worlds look more solid and stable than those on competing systems. What's more, Nintendo's unusually-shaped controller was tailor-made for 3D games – though analogue sticks had existed before, these were the first time they made sense at home. "Before anyone thought of a second analogue stick, they factored in the fact that you may need to control the camera," adds Paul, in reference to the C buttons.

Likewise, the N64 wasn't the first console to include four controller ports, but was arguably the first to adequately support them thanks to games like *Mario Kart 64*, *GoldenEye 007* and *Super Smash Bros*. That became a standard feature on most subsequent consoles, as did support for controller vibration – something that was introduced as an add-on via the Rumble Pak on the N64, but soon became integrated into controllers. Unfortunately for Nintendo, these features and some excellent games weren't enough to stop the N64 finishing a very distant second to the PlayStation.

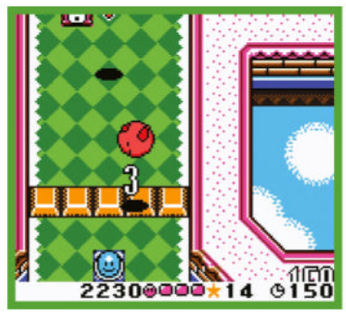
In the realm of handhelds, Nintendo saw less reason to rock the boat, and the Game Boy Color was an obvious but modest upgrade to the ageing Game Boy in 1998. The Game Boy Advance followed in 2001, and while it was more powerful, the most surprising thing about it was its horizontal orientation. That said, the ability to play multiplayer games from a single cartridge was a welcome addition. Not so welcome was the rubbish display of the original model. "I remember being abroad with my friend, and he had the Game Boy Advance SP and he could see it all times of the day," says Alastair, referring to the system's 2003 update with a front-lit screen, rechargeable battery and clamshell form factor. "I had the standard one and couldn't." That didn't stop the console being a big success, mind.

ONE HIT WONDERS

SOMETIMES, NINTENDO WILL INTRODUCE AN IDEA THAT IT NEVER REVISITS – HERE ARE SOME OF OUR FAVOURITES

AMBIDEXTROUS CONTROLLER

The Virtual Boy is the only Nintendo console to have a fully symmetrical control pad – something which could be quite handy for players who'd prefer to swap the layout around. The Wii Classic Controller and Wii U Pro Controller both come close, but for the difference between the d-pad and buttons.



KIRBY: TILT & TUMBLE

Long before gyroscope players dominated Turf Wars in *Splatoon*, this Game Boy Color game incorporated motion sensors in its cartridge, letting you roll Kirby around colourful landscapes to your heart's content. Though Nintendo revisited tilt on the GBA, this was its sole experiment with the technology on the 8-bit handheld.

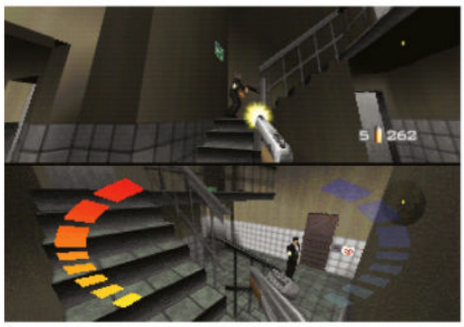
DONKEY KONG: JUNGLE BEAT

OK, so the DK Bongos were obviously used in the *Donkey Konga* games, but the use of the music controller in another genre was simply inspired – and as far as we know, it's still the only bongo-based platformer out there. It added satisfying physicality to beating up the baddies, too.

POKÉWALKER

It may seem a little redundant given the handheld-first nature of the *Pokémon* franchise, but we always liked this cute little pedometer that accompanied the *HeartGold* and *SoulSilver* versions on the DS. If nothing else, it encouraged us to take walks with Pikachu before *Pokémon Go* became a big deal.

» [N64] Analogue control was essential to the precise, measured feel of *Super Mario 64*'s movement.



» [N64] Games like *GoldenEye 007* proved the wisdom of adding more control ports to the console.

» The Rumble Pak was first bundled with *Star Fox 64*, and occupied the N64 controller's expansion port.

The GameCube was also arguably another conservative design, despite its distinctive appearance. It certainly wasn't a slouch when compared to the PlayStation 2 and Xbox – speaking in issue 103 of *Edge*, Criterion's Alex Ward praised it as "a great machine" and Jez San said that the "specifications are great". However, an anonymous developer was damning, saying that "the hardware and controller (good though they are) don't do anything special, apart from be small". Plenty of players love the GameCube controller, but it was simultaneously close to the norm while being just distinctive enough to be a source of complaints for players picking up third-party games. Additionally, the system's small DVDs were cute but developers wouldn't have minded the extra storage of standard DVDs.

> "PEOPLE WERE BUYING IN THEIR DROVES BECAUSE YOU'D HAVE THE PEOPLE THAT WANTED IT FOR ZELDA OR METROID, NINTENDOGS OR ANIMAL CROSSING"
> **PAUL MURPHY**

There were still highlights, of course. The DK Bongos were a delightful prelude to the *Guitar Hero*-inspired plastic instrument boom. Meanwhile, the GameCube to Game Boy Advance link cable allowed Nintendo to experiment with multiple displays and was used in a variety of games, but never became a huge feature. *The Legend Of Zelda: Four Swords Adventure* best illustrates why, as it was an excellent experience but enjoying it at its best required four GBA consoles, four link cables and a GameCube – a heavy commitment to Nintendo hardware, even divided among a group of friends.

Despite being blessed with plenty of fantastic games, the GameCube continued Nintendo's trend of declining home-console sales. Faced with the realisation that its existing approach wasn't working, Nintendo changed tactics, deciding that it didn't need to match the processing power of its rivals if it could provide sufficiently unique experiences. The handheld market was the ideal place to test that – though Sony was preparing to enter the market with the PlayStation Portable, Nintendo had dominated the sector for over a decade. Even then, the company hedged its bets, stressing that its new machine wasn't a replacement for the Game Boy line.

On the face of it, the Nintendo DS was a strange mix of ideas. Its vertically stacked twin displays were reminiscent of the Game & Watch handhelds of the Eighties, the microphone was a throwback to the Famicom and the last handheld to integrate a touchscreen interface was Tiger Electronics' risible Game.com. Prior to the system's launch, *games™* expressed concern that it was "little more than a gimmick – something to keep the crowds occupied until the true successor to the Game Boy Advance appears". Ultimately, the touchscreen proved most important, as Nintendo was releasing games that targeted very broad audiences and the intuitive interface lowered the barriers to enjoying them. "You had *Brain Age*, *Big Brain Academy* and things like that, and there was something for you, no matter what it was that you wanted," says Paul. "People were buying in their droves because you'd have the people that wanted it for *Zelda* or *Metroid*, *Nintendogs* or *Animal Crossing*." Rob O'Farrell created the original rhythm action

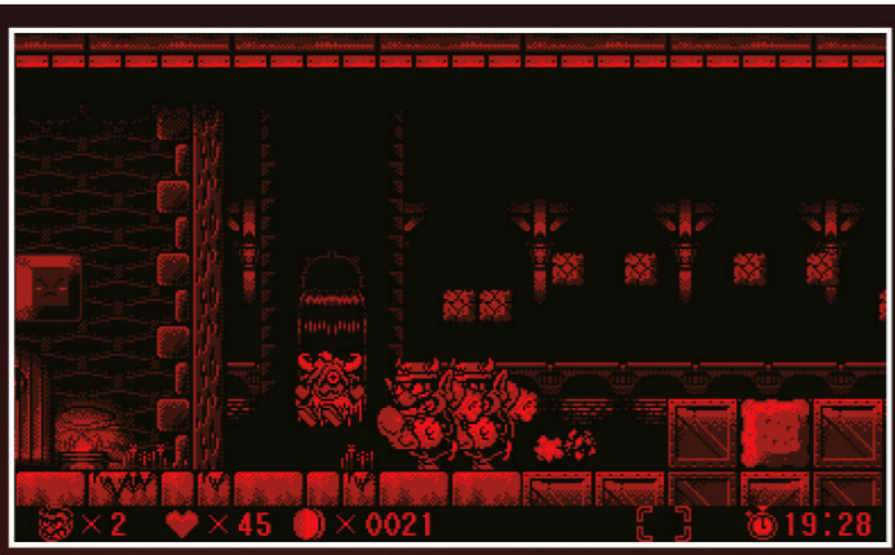
MARIO KART LIVE

It's not ideal on every floor and your cat probably hates it, but there's no denying the cool factor that accompanies turning your living room into a raceway. Just don't let your kids start throwing banana peels around, unless you want a quick trip to the hospital. Oh, and ants.

game *Zubo* for the DS at EA. "It was the perfect platform for kids, and this was a kid's IP that we wanted to grow and that's why the machine was perfect for it," he recalls. "It was good fun to watch the characters because they come alive, they were just really good to create. Because of the touchscreen and the dance moves, we could do the tapping with the stylus and that worked really well." Developers got even more options with the refreshed DSi, which added a store for downloadable games and a camera that few games ultimately used. The DS was an enormous success, with the various models selling a shade over 154 million units – Nintendo's most popular hardware ever, to date.

The bigger test of this new philosophy came in the home-console space, though. In terms of raw power, the Wii didn't represent a full generational leap over the GameCube. The controller was a complete departure from the norm, packed with motion-sensing hardware to enable natural gesture-based controls, pointer controls and more – technology that had been offered by Gyration Inc to Microsoft and Sony, both of which turned it down. The device was shaped like a TV remote control rather than a traditional game controller in order to broaden the appeal of the console. For more traditional controls, the Nunchuk attachment added an analogue stick and additional buttons, or a Classic Controller could be attached.

Wii Sports was packaged with the console when it launched in 2006, and proved to be its killer app – since players simply had to imitate the motions involved in the real-life sports, everyone from the youngest kids to the elderly could enjoy the game with a minimum of instruction. The active nature of the game



» [Virtual Boy] Look past the colour scheme, and the Virtual Boy can handle some rather lovely sprite work.

VIRTUAL INSANITY

HOW THE VIRTUAL BOY PROVED THAT INNOVATION ISN'T ALWAYS PROGRESS

3D displays have been a repeated theme with Nintendo, that it has never quite pulled off – it released glasses for the Famicom and prototyped support for the GameCube, as well as including it in the 3DS. However, the Virtual Boy is the effort Nintendo would like us all to forget, a commercial bomb that sold under a million units and saw less than two dozen games released. It's rarely referenced and its games have never been reissued, despite the fact that the 3DS provided the perfect opportunity to do so. Though the system was undoubtedly a commercial failure, it's home to some good games and worthy of examination, as it uses a wholly unique display technology developed by Reflection Technologies, Inc – technology that Nintendo chose to use after Mattel, Hasbro and Sega all turned it down.

» Here's the motorised mirror unit that turns those LED columns into full frames.

The way it works is that the headset uses a distinct display for each eye, as most modern virtual reality devices do. Each display consists of a 1x224 LED array, which is updated 384 times per frame and reflected using rapidly oscillating mirrors, so as to simulate a full 384x224 frame. At around 50 frames per second, this means each LED array updates approximately 19,200 times per second. Incidentally, the use of LEDs is to blame for the system's red graphics, as these were the cheapest colour available and supposedly drew less power than alternative options.

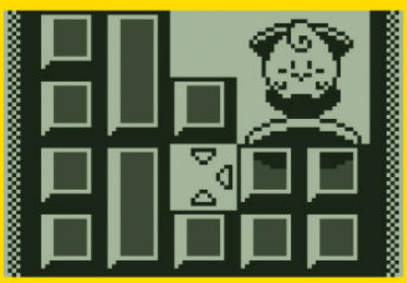
MINIATURE MARVEL

NINTENDO'S SMALLEST CONSOLE IS ALSO ITS LEAST RECOGNISED

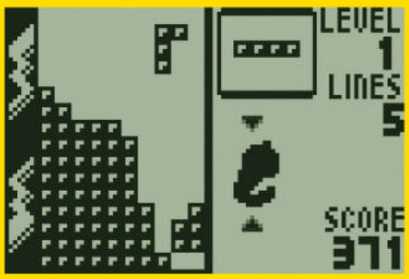
■ Between the massive success of the Game Boy and DS handheld families, it's very easy to forget that Nintendo did release another handheld in 2001 – the delightfully dinky Pokémon Mini. The low-cost console is the smallest Nintendo console to offer interchangeable cartridge games, at just 74mm x 58mm x 23mm, and was first released in North America in November 2001. It soon followed to Japan and Europe, and was available in three colours.

Given the size of the machine, its capabilities were understandably rather limited. The system's 8-bit Epson S1C88 CPU ran at 4MHz, and its monochrome LCD display had a resolution of just 96x64 pixels, with cartridge ROM capacity of up to 512KB. This did all make it incredibly cheap to run, as it required just one AAA battery and could reportedly last up to 60 hours on that.

As you've probably guessed from the name, the low-cost console exclusively hosted *Pokémon* games, though there was some variety – the console's line-up of ten games includes pinball, minigames and even a version of *Tetris*. Sadly, half of the cartridges never saw release outside of Japan, with just four available in North America and five in Europe.



» [Pokémon Mini] Due to the time period, only the first 251 Pokémon appear in Pokémon Mini games.



» [Pokémon Mini] Who's that Pokémon? It's Weedle! Meme points if you said Pikachu, though.

» [Game Boy Advance] The Game Boy Advance was a safe option, and an absolute powerhouse for 2D games.

» [GameCube] *The Legend Of Zelda: Four Swords* was great, but far from easy to get set up

» [GameCube] In lieu of hardware experimentation, Nintendo tried stylistic innovation during this era.

» Hands up – who ever actually used the infra-red communication feature on their Game Boy Color?

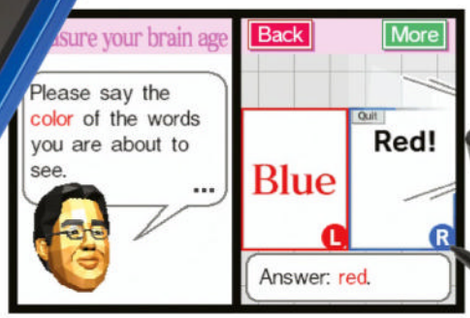
» The GameCube's much-loved Wavebird paved the way for wireless controls as standard on the Wii.

▶ also drew plaudits, and Nintendo followed up on the fitness theme with *Wii Fit*, which utilised the Balance Board accessory. Plenty of traditional games made great use of the Wii Remote too, including *Resident Evil 4* and *Sin & Punishment: Successor Of The Skies*. "Stuff like *Metroid: Other M*, I absolutely love that control scheme of changing between [regular controls] and [pointing], it's the only console that would let you do that kind of interface," says Alastair.

However, there was a portion of the gaming audience that never really embraced the Wii, and third parties sometimes struggled to find an audience on the platform. In a 2010 interview with IGN, THQ's CEO Brian Farrell would say that "if you look at what's selling on Wii, it's Nintendo's stuff and it's kids, family and casual" and that "more of the core-gaming audience is on 360 and PS3". Even today, its 'waggle' controls are often derided. "I think developing for the Wii was hard actually, because trying to get those controls and making it feel really good was always a challenge," says Rob. "It was a very Nintendo platform, they knew how to get the best out of those controllers. We did *Harry Potter* on the Wii and the spells worked, but it wasn't our first platform of choice to develop for." The Wii MotionPlus add-on did increase the accuracy of the motion tracking in 2009, but by then it hardly mattered – the Wii was already well on its way to overtaking the NES as Nintendo's best-selling home console ever.

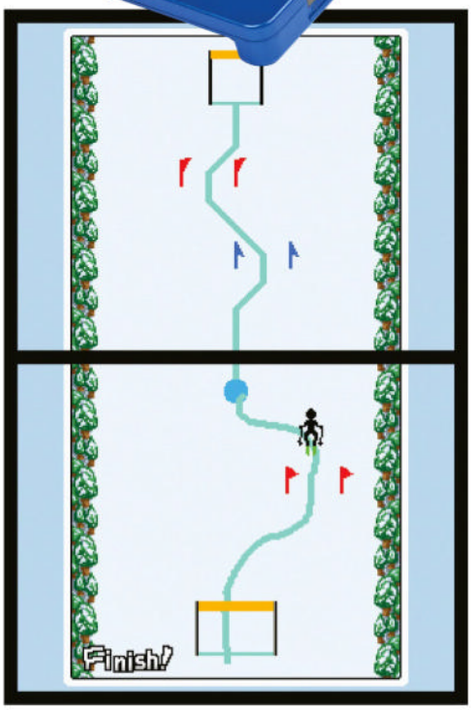
The good times couldn't last forever though, and although it was announced just after *Avatar* had smashed box-office records and driven renewed interest in 3D movies, the 3DS was the first indication of tougher days to come. The new handheld resembled its predecessor, but with a wider glasses-free 3D display as the top screen. At E3 2010, Shigeru Miyamoto explained that he felt that

» Arguably, the Game Boy Advance SP is the system we should have had all along.



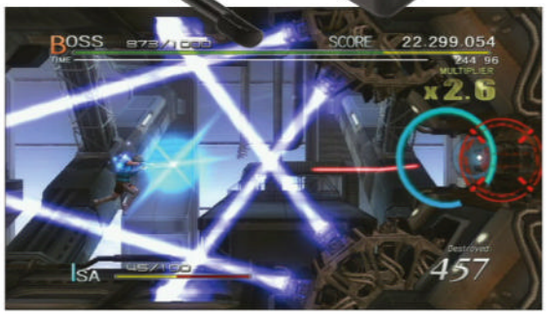
» [DS] *Brain Training* used all of the hardware's functions, and appealed to non-traditional gamers.

» The DS Lite arrived in 2006, improving the size and cosmetic appearance of the handheld.



» [DS] The *WarioWare* games have historically served as excellent demonstrations of new hardware capabilities.

» Without online options, Nintendo released expansion content for *Super Mario Advance 4* via e-Reader cards.



» [Wii] Games like *Sin & Punishment: Successor Of The Skies* are well worth embracing the Wii Remote for.

» This was exactly the co-driver scenario Rob had in mind for *Need For Speed: Most Wanted U*.

3D was important because "it can be very difficult without 3D visuals to understand the depth and distance between objects and that spatial relationship". However, players were less convinced. The high price of the console contributed to sluggish sales when it launched in 2011, and Nintendo had to enact a drastic price cut just months into the system's life to stimulate sales. "I didn't see it as that much of an upgrade from the DS, and it was a sweet spot 3D that you had to be in the correct place for," recalls Alastair.

The 3D could look great, especially with the revised New Nintendo 3DS models that included eye tracking, but rarely seemed to add much to games. Soon enough, Nintendo delivered the 2DS which lacked that signature feature, and many later games simply didn't support 3D at all. The new gyroscopic controls and cameras added more options, but didn't see much use. The system's best-loved innovation was arguably StreetPass, a feature which allowed nearby 3DS systems to wirelessly exchange data in standby mode. The exact nature of the data depended on the game in question, but plenty of people just loved the social aspect of encountering other people's Mii characters and using them in games like *StreetPass Quest*.

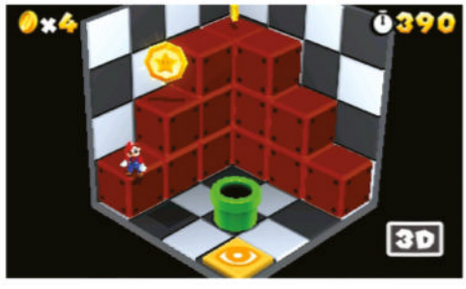
While the 3DS never approached its predecessor's sales figures, it did eventually sell well. The same couldn't be said for the Wii U. The console was launched in 2012 and provided a step up in power from the Wii, comparable to the Xbox 360 and PlayStation 3, with its primary distinguishing feature being the GamePad – a bulky controller with a touchscreen as well as traditional controls, which could be used as a second screen or a way to play the console without the use of a TV. In a special E3 2011 edition of Iwata Asks, Shigeru Miyamoto expressed the feeling that the screen was "a tool that makes things easier to understand" and that "we thought in that case, we'd stuff it with features so it could do anything".

> "MOST OF THE PEOPLE I SPEAK TO THAT AREN'T GAMING ENTHUSIASTS, THEY THOUGHT THE TABLET ITSELF WAS AN ACCESSORY"
> **PAUL MURPHY**

From the start, the Wii U's branding and resemblance to its predecessor were a problem. "Most of the people I speak to that aren't gaming enthusiasts, they thought the tablet itself was an accessory," says Paul. "They didn't understand it was a completely new console." But the bigger problem was finding good uses for the secondary display. At the Develop conference in 2012, months ahead of the Wii U's launch, industry analyst Michael Pachter called the GamePad "a solution in search of a problem". It was tough to argue

» [Wii] *Wii Sports* was responsible for a Nintendo boom era, and more than a few smashed TVs.

» The versatility of the Wii Remote was occasionally undercut by the plastic housings it attracted.



» [3DS] *Super Mario 3D Land* was one of the few 3DS games to use 3D effectively.

with that sentiment when the console finally arrived, as even Nintendo struggled. In its review of *Nintendo Land*, *games™* claimed that "Nintendo's confusion over what it wants to achieve with the Wii U GamePad" was a problem, and further noted that the device "feels a bit short-changed" in its review of *New Super Mario Bros U*.

> "THE SWITCH IS WHAT EVERYBODY WANTED FOR A WHILE, ISN'T IT? TO BE ABLE TO PLAY A GAME AND INSTANTLY JUST PLAY IT BACK AT HOME"
> **ALASTAIR LOW**

Compelling use cases did sometimes present themselves though, such as in the well-received Wii U version of *Need For Speed: Most Wanted*. "My daughter would have been about three or four, and she was too young to play games." says Rob, the game's producer. "How can you make sure they have fun playing it while driving at speed?" The answer was the Co-Driver Mode, in which a second player could use the GamePad to assist with steering, clear traffic and roadblocks, and even change the time of day. "We could put the controls in my son or daughter's hand and if they're about to crash, you'd just steer away a little bit. We did a lot of play testing with other kids, and they didn't want to know that the control has been taken off them, but they didn't want to crash."

The Wii U suffered from a vicious cycle, as slow sales meant that those rare third parties that maintained support for the console rarely devoted much thought to GamePad features. In turn, there were few compelling reasons to buy the console. The console tanked, and the experience seems to have inspired something of a change in Nintendo's hardware philosophy. For years the company tried to find technologies that would lead to compelling new gameplay possibilities, but with its next system, it placed its focus on designing technology to aid players in fitting games into their everyday lives.

The result was the Switch, which launched in 2017 and merged Nintendo's handheld and home-console lines. The console, which looks like a sleeker version of the Wii U GamePad, functions as a stand-alone portable system, but also hooks up to a TV via the packaged docking unit. Its Joy-Con controllers can either be attached to the central tablet, or slotted into a frame that offers handles for added comfort. "The Switch is what everybody wanted for a while, isn't it? To be able to play a game and instantly just play it back at home," says Alastair. The initial reveal of the console effortlessly communicated that concept, too.

It wasn't just the technology that Nintendo got right, though. "There was always something coming, whether it was a new franchise like *Arms*, an old trusted favourite or ports of Wii U games, because they hadn't really reached that audience," says Paul. If anything, the Wii U ports highlighted the superfluous nature of the GamePad's second screen, with few games feeling meaningfully diminished without it. Without the need to support two different systems, Nintendo could also maintain the pace of game releases more easily. The Switch was highly popular from day one, and has sold over 141 million units at the time of writing, giving it a real shot of surpassing the DS.

With the Switch now over seven years old, Nintendo has declared that it will reveal a new system in the near future. Players and industry figures alike anticipate that it won't deviate far from the hybrid design of the Switch, but if that idea sounds mildly disappointing to you, there's no need to fret. While the Switch itself features plenty of options between established button, touchscreen and motion controls, Nintendo has still tried out some more experimental ideas. *Ring Fit Adventure*'s Ring-Con recalls the exercise-based games of the Wii era, while Nintendo Labo gives players the opportunity to build their own peripherals from cardboard kits. Then there's *Mario Kart Live: Home Circuit*, a mixed-reality version of the popular racing franchise that allows you to drive radio-controlled cars with integrated cameras using your Switch.

Ultimately, those Switch games give us confidence for the future. Compared to the other hardware manufacturers active today, Nintendo is defined by its willingness to explore new ways of interacting with videogames. Those ideas don't always succeed, but there's a long enough track record of hits over the decades that it's impossible to deny just how much the company has done to transform our hobby. No matter what the next Nintendo console looks like, we can't wait to see what delights will be born from that passion for invention. ✱

» Nintendo Labo represents a more environmentally sound alternative to the plastic tat of the Wii era.

» This Balance Board fondling was what Wii owners were expected to aspire to.

» Images like this didn't help consumers to distinguish between the Wii U and its forebear.

INTERFACE ITERATION

NINTENDO'S SWITCH CONTROLLERS ARE THE RESULT OF 40 YEARS OF REFINEMENT – HERE'S HOW WE GOT FROM HUMBLE BEGINNINGS TO THE PRESENT DAY

GAME & WATCH

■ This is where it all begins – the cross-shaped directional pad sets the standard for digital controls on Nintendo systems going forward.

NES

■ Moving on from the bespoke controls of Game & Watch devices, Nintendo establishes two action buttons and two function buttons as standard.

SNES

■ The four-button diamond layout appears for the first time, as do the shoulder buttons – both ideas that would be widely adopted across the industry.

N64

■ Handles come as standard for the first time, though the third doesn't last. Having an analogue stick as standard soon catches on across all consoles.

GAMECUBE

■ Integrating vibration as standard and borrowing the second analogue stick from Sony's DualShock, this is pretty close to modern controllers.

WII

■ The remote control body shape was a one-off, but the wireless connectivity, Home button and motion-sensing features live on today.

WII U PRO CONTROLLER

■ This evolution of the Wii's Classic Controller is very modern, but shows Nintendo's ongoing indecision over analogue stick placement.

SWITCH PRO CONTROLLER

■ The Pro Controller is very similar to its Wii U equivalent, with the most notable change being the return to the GameCube-style asymmetrical analogue stick placement.

SWITCH JOY-CON

■ The Joy-Con shares the Pro Controller's analogue stick placement – this layout ensures that the stick is always on the left when a single Joy-Con is used as a mini-controller.

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WORDS BY PAUL DRURY AND ANDREW FISHER

BACK ISSUE HIGHLIGHTS

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A RARE CELEBRATION

ISSUE 250

■ Want the definitive article on Rare? This is where you'll find it. A Rare Celebration breaks down every era of the studio, from its early days as Ultimate Play The Game to its exciting N64 years. It concludes with a look at Rare's last two decades at Microsoft and classics like *Rare Replay* and *Sea Of Thieves*. Don't miss it.

40 YEARS OF THE ZX SPECTRUM

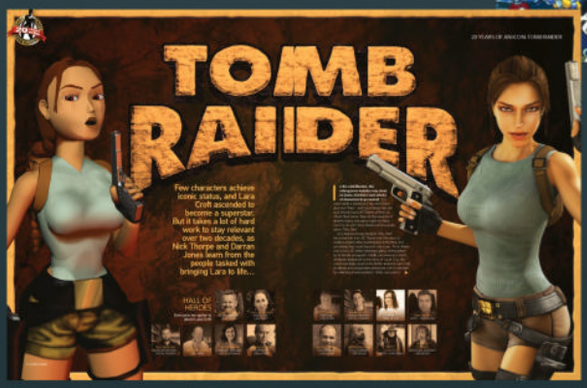
ISSUE 232

■ This in-depth article features a number of prominent game developers and breaks down the lifespan of the humble Speccy on a year-by-year basis, from its early innovative games to its exciting homebrew era which is still going strong today. If you're a Commodore 64 fan you'll find a similar feature on that system in **RG** 238.

A TRIBUTE TO TREASURE

ISSUE 219

■ One of our most popular features has been our A Tribute To series, which highlights a developer's back catalogue and includes input from the creators. It all kicked off in issue 219 with Masato Maegawa guiding us through Treasure's 32-year history. Other notable articles in the series include Ocean Software (**RG** 244) and Falcom (**RG** 224).



20 YEARS OF TOMB RAIDER

ISSUE 163

■ We wanted to do something truly special for Lara Croft's 20th anniversary so we spoke to a huge number of *Tomb Raider* veterans to give an incredibly comprehensive overview of the popular series. If you're a fan of the *Tomb Raider* series you'll find this article is filled with fascinating insight about the blockbuster franchise.

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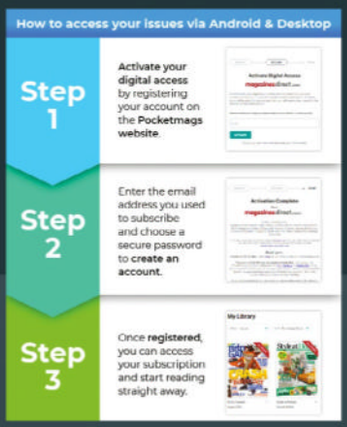
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THE MAKING OF TECHNICIAN TED

WELCOME TO A DAY IN THE LIFE OF MICROPROCESSOR TECHNICIAN TED, THE HARDEST WORKING EMPLOYEE AT MICRO-USER DEVICES' CHIP FACTORY. TODAY, THERE ARE 21 TASKS, AND THE CLOCK'S TICKING. WE'D BETTER GET ON WITH THE MAKING OF TECHNICIAN TED

WORDS BY GRAEME MASON

IN THE KNOW

- **PUBLISHER:** HEWSON CONSULTANTS
- **DEVELOPER:** STEVE MARSDEN AND DAVID COOKE
- **PLATFORM:** ZX SPECTRUM, AMSTRAD CPC
- **RELEASED:** 1985
- **GENRE:** PLATFORMER

» Today, Steve works for the US State Government.

If you're a writer, they say you should write about what you know. For *Technician Ted*'s Steve Marsden, the same goes for games programmers. "After leaving school and college, I worked as an electronic engineer in a semiconductor factory, making a variety of silicon devices – chips," begins the coding veteran. "We had access to many computers in that field, so naturally, I ended up buying home computers to dabble with."

Before this point, Steve experimented with a Sinclair programmable calculator and a PDP8-E while at secondary school. "It was a room full of fridge-sized hardware!" he laughs. Then, on to the ZX81, and finally ZX Spectrum. As you might expect, this led to Steve becoming more interested in games creation than the games themselves. "A computer was a tool, and I liked the intellectual side of creating the game code rather than the actual game itself. I was more interested in beer and football and didn't waste as much money as my friends did on arcade machines."

Technician Ted is the tale of the eponymous overworked factory employee. Initially titled *The Chip Factory Featuring Technician Ted* – a name which remains on the loading and title screens of the original Spectrum 48K version – the game takes place over one busy day at Ted's factory, Micro-User Devices Ltd. "David Cooke and I worked together at the semiconductor factory – it was called Marconi Electronic Devices Ltd, or MEDL for short," recalls Steve. "In the game, we changed the name, so it was shortened to MUDL – or rather, muddle, to reflect some of the haphazard organisation at the factory."

> **"IN THE GAME, WE CHANGED THE NAME, SO IT WAS SHORTENED TO MUDL – OR RATHER, MUDDLE"**
> **STEVE MARSDEN**

Ted arrives at his work at 8.30am, his testing day before him. After walking through the factory gates, he passes into reception, and things are already looking strange: a one-ton weight is crushing anyone foolish enough to wander underneath it, and a fire extinguisher and plant pot have taken lives of their own. Ted, however, must remain focussed. There's lots to do before 5.00pm and home time.

Firstly, Ted reports in at his desk. After he's hung up his coat and tidied up, it's off to the Silicon Slice Store to cut some red tape and more clearing up. What a messy – and crazy – factory this is. Ted's unnamed pal is on hand to assist in these early

DEVELOPER HIGHLIGHTS

CITY SLICKER (PICTURED)
RELEASED: 1986
PLATFORM: ZX SPECTRUM, AMSTRAD CPC

BLOOD BROTHERS
RELEASED: 1988
PLATFORM: ZX SPECTRUM, AMSTRAD CPC

SHADOW OF THE BEAST
RELEASED: 1990
PLATFORM: ZX SPECTRUM, AMSTRAD CPC

» [ZX Spectrum] Bay 7, complete with several ZX Spectrums.

moments; they're soon busy with their own day, leaving Ted to his own devices. With each task being due at a specific time and several tricky areas to traverse, *Technician Ted* is possibly one of the most demanding games on the ZX Spectrum.

Steve and David's inspiration for *Technician Ted* came from an unsurprising source. "It was *Manic Miner* and *Jet Set Willy* for sure that inspired [*Technician Ted*]," explains Steve. "Platform-style games were among my favourites, and I knew that I could improve on a lot of things with those. Not that they weren't superb products – Matthew Smith did a fine job. I also liked games such as chess because I was more interested in algorithms. Programming games like chess was more about what goes on under the hood."

Nevertheless, Steve and David chose a platform game for their first commercial project on the ZX Spectrum. "Dave and I worked together building silicon devices – we had both grown up in our home town of Lincoln and shared a love of the electronics hobby, often visiting the same shops in town," says Steve. "We were cut from the same cloth and had the same interests in programming and technical innovation."

» [ZX Spectrum] The Beaker Store is a sparse yet challenging jumping screen.

» [ZX Spectrum] Drinks cabinet just out of view.

» [ZX Spectrum] It looks like a poltergeist has been at work in the Canteen…

» [ZX Spectrum] The nefarious Cloakroom requires fine jumping skills to cross.

CONVERSION CAPERS

RETRO GAMER TAKES A PEEK AND A POKE AT ALL THREE VERSIONS OF TECHNICIAN TED

ZX SPECTRUM (48K)

While far from original, *Technician Ted* offers refined gameplay and mischievously designed screens to complement its technical flourishes. Ted himself moves sharply, and there are some wonderfully weird enemies, most ripped from a standard office or factory environment. While its gameplay may be familiar, *Technician Ted* has enough of a challenge and novel environment to set it apart from the swathe of *Jet Set Willy* clones on the ZX Spectrum.

ZX SPECTRUM (128K MEGAMIX)

One of the few criticisms of the original *Technician Ted* was that the player had very little clue as to which order to complete Ted's tasks. This 128K remix, released just over a year later, solves this by numbering each task; but with double the amount of rooms to explore and more tasks, *Technician Ted* remains a tough game to beat. Other improvements include a smoother tune, loading screen tips and a greater variety of enemies.

AMSTRAD CPC

The development team of Steve Marsden and David Cooke replicated their ZX Spectrum smash on the Amstrad CPC, tweaking the game's colours but little else. The ever-present tune can be just as grating as it is on the Spectrum, and the difficulty curve is almost vertical as Ted once more attempts to complete all his tasks. The merging of platformer and arcade adventure remains enticing, yet it's a shame Amstrad owners didn't get the improved *Megamix* version.

TOUGHER THAN THE REST

THE FIVE DEVILISH ROOMS THAT'LL HAVE YOU TEARING YOUR HAIR OUT IN TECHNICIAN TED

THE CLOAKROOM

The Cloakroom is one of the earliest rooms in *Technician Ted*, and each coat hook is deadly to the touch. This makes crossing the platforms extremely hazardous, with several pixel-perfect jumps required.

WE CALL HIM SIR

There are more of those pesky hooks here as Ted seeks to placate his obstreperous boss by bringing him his copy of the *Financial Times*. Dodging the boss's secretary is no simple task, either.

SILICON ETCHING TANK

Ted must tread carefully here: in addition to a conveyor belt and deadly jug of acid, the red spiky floors spell instant death. There's only one item to activate, but it's a pain to get to.

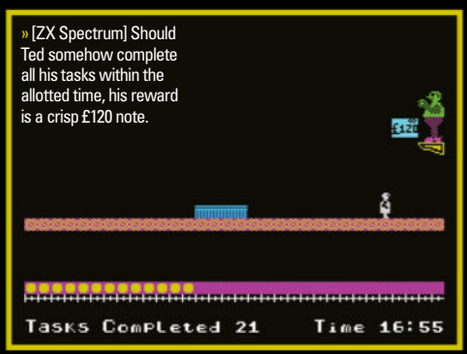
ABRASION DUST EXTRACTION

This *is* sneaky: catching the spider at the top of this room releases a surprise enemy, the spinning green square just to the right of Ted. Approach from the right, and Ted should be OK… should…

WAGES DEPARTMENT

Ted's final task is to collect his wages; fittingly, this is made super-tricky with one of the hardest jumps in the game. Ted must get to the lower red ledge to avoid a fatal drop.

» [ZX Spectrum] An optimistic Ted wonders where his reward is following a hard day.



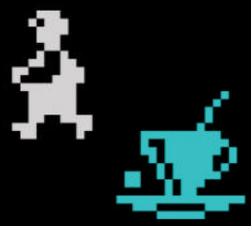
» [ZX Spectrum] Should Ted somehow complete all his tasks within the allotted time, his reward is a crisp £120 note.

The pair soon began developing their game in the spring of 1984, alongside their day job at the semiconductor factory; in fact, they'd already written their own Z80 assembler to help them code *Technician Ted*.

The Marconi factory influences many of *Technician Ted*'s rooms and processes. "I was making silicon chips, transistors and so on," explains Steve. "I also worked with chemicals while David was an engineer." These elements are characterised by the enemies in *Technician Ted*: bottles of acid, fizzing beakers and rogue pieces of electronic equipment are present in many rooms, each one spelling instant death for poor Ted.

In addition to their assembler, Steve and David devised multiple toolkits to aid their development, including a program to help them create the game's graphics. The two worked in tandem, sharing all the required duties. "Dave and I had a methodical way of going about things due to our scientific backgrounds," says Steve. "And, as we built things in silicon in our day jobs, nothing fazed us about computer hardware because we knew the limitations very well."

This experience – blended with a dash of youthful enthusiasm – allowed Steve and David to incorporate several impressive technical innovations into *Technician Ted*. "The excitement starts straight away with the highly unusual loader," noted Spectrum magazine *Crash* in its *Technician Ted* review of February 1985, "which not



only masks the border but also… there are ranks of Technician Teds marching up and down the screen at the same time." The magazine gave the Hewson Consultants game a stupendous review – but we'll get on to that in a moment. "I was pretty proud of the pioneering technical features in the game, such as the animated tape loader and countdown clock – neither of which had been done before," remembers Steve.

Also of note is *Technician Ted*'s music. Derived from another of Steve and David's machine code routines, two different tunes play over the title screen and gameplay. "It was all copyright-free classical music, which was quite common back then," notes Steve. The young coders were particular fans of the Strauss family of composers: the in-game piece came from Johann Strauss I's *Radetsky March*, while the title music, made famous in the 1968 Stanley Kubrick movie, *2001: A Space Odyssey*, is from Johann Strauss II's waltz, *The Blue Danube*.

Steve and David worked on *Technician Ted* throughout 1984, and by late-summer, they had a workable version of the game ready. "I mailed out cassette copies to five different companies, including Melbourne House, one of the biggest publishers at that time," remembers Steve. "It was the first to respond in writing, saying the game wasn't very good and it wasn't something they'd be interested in!" While two further software houses submitted similarly unencouraging missives, Firebird Software (Telecomsoft) heartened Steve and David when it requested a meeting. "[Firebird] wanted to talk about publishing the game – but as a budget title. That left Hewson."

Having hit the Spectrum heights earlier in 1984 with Steve Turner's *Avalon*, Hewson boss Andrew Hewson liked *Technician Ted* enough to agree on full-price publication. "I was always interested in the underlying technology," Andrew told **Retro Gamer** back in issue 241's tribute to the publisher. "[This] made *Technician Ted* additionally attractive to me because it had its bespoke loading screen."

» [ZX Spectrum] Ted arrives at the Factory Gates, an anachronistic penny-farthing bike behind him.

» [ZX Spectrum] Ted's first task takes place inside his own office.

With a swift change of title, *Technician Ted* was published by Hewson, with Spectrum magazine *Sinclair User* first past the post with a review. Cautious over the game's lack of originality, a seven out of ten score ensued – one month later, this was spectacularly eclipsed by its Crash Smash and a mammoth 96% score in rival *Crash*, beating its inspiration, *Jet Set Willy*, by a single percent. "That was extremely pleasing!" exclaims Steve, "And at the time, it was [*Crash*'s] highest-scoring game. I enjoyed meeting Roger [Kean, *Crash* editor] and the guys at Newsfield. Funnily enough, Dave's paternal family were from Ludlow."

> "I WAS PRETTY PROUD OF THE PIONEERING TECHNICAL FEATURES IN THE GAME"
> STEVE MARSDEN

Along with its imitative gameplay, the most significant criticism of *Technician Ted* was its difficulty. Steve and David perfected a system called Precision Pixel Detection, enabling the player to take highly accurate jumps. The developers infused their game with multiple situations where such timing is required. "In retrospect, it was perhaps too hard," admits Steve. The Precision Pixel Detection was a double-edged sword in that it sometimes put an undue burden on the player. It took a good five or six months for anyone to beat the game, though, and the platform fans seemed to like it." Hewson inevitably used the system in its advertising campaign, boasting of "perfected collision detection". "To tell the truth, I was not the least convinced that the enjoyment of the game flowed directly from the collision detection system," notes Andrew Hewson in his book *Hints & Tips For Videogame Pioneers*. "But I was quite happy to make that suggestion in our PR campaign."

Technician Ted did solid business for Hewson. Subsequently, with the 128K Spectrum finally announced, the publisher asked Steve and David to create an upgraded version of their game. *Technician Ted: The Megamix* was born, with double the number of screens and simplified gameplay, with the tasks (up from 21 to 30) now numbered, helping the player tackle them in the correct order. 1985 was a busy time for Steve and David – they also wrote the Amstrad CPC version, released the following year alongside the *Megamix*.

1986 saw the two-person team develop a sequel, *Costa Capers*, this time published by Firebird as a part of its new *HOT* range. After more 8-bit development (most notably *City Slicker* for Hewson), Steve and David formed their own company, Spidersoft, in 1992, and both programmers went on to have significant careers in the industry. But it all started with the portly Ted. "I'm very pleased to have been a part of the genesis of the UK games industry," smiles Steve. "I like retro games more today than I did back then, as there's a nostalgic element you obviously didn't have at the time. A lot of people today see these games as cool, and I'm glad I was a kid with an intellectual hobby that enabled me to get into games programming as a career." *

Our thanks to Steve Marsden for his time.

Family BASIC fact

■ In 1985, Family BASIC V3 was released for ¥9,800. The new version was aimed at existing users, and included a new cartridge that offered 4KB of RAM as well as an updated handbook.

Family BASIC

» **PLATFORM:** Famicom » **YEAR: 1984** » **COST:** ¥14,800 (launch), £130+ (today, boxed), £80+ (today, unboxed)

That Family Computer name wasn't just for show – if you fancied programming a game on your Famicom, this collaborative effort between Nintendo, Sharp and Hudson Soft allowed you to do just that. The Family BASIC package cost as much as the Famicom console itself, and contained a handbook, a keyboard and a ROM cartridge containing the main program. The keyboard shared the console's colour scheme and plugged into its front expansion port, and featured both the English alphabet and Japanese katakana characters.

Family BASIC came with some pretty severe restrictions – only 2KB of RAM was available, and users had to make do with built-in sprites such as Mario. Saving programs required the additional expense of a cassette deck, though the cartridge allowed players to insert two AA batteries to ensure that RAM wouldn't be wiped between sessions. While it didn't herald a bedroom coding boom, Family BASIC did gain a committed audience in spite of its limitations, including *Pokémon* creator Satoshi Tajiri. Readers continued to submit Family BASIC type-in listings to Japanese magazines such as *MicomBASIC* until the early Nineties. ✱

SUPPLIED BY
EVAN AMOS

ESSENTIAL GAME

METAL ARMS

This program was originally published in the January 1990 issue of *MicomBASIC* and developed by Shingo Yasue, Hiroshi Yumiya, Shouji Nakagaki and Katsutoshi Nakaya. *Metal Arms* pushes Family BASIC to its limits, not only using the expanded V3 cartridge but even requiring a multi-load system from the cassette. The end result is a simplistic but very challenging vertical shoot-'em-up, with a few distinct types of enemies and some pretty neat bosses. It's a great example of what can be done when limited resources are used in creative ways.

THE STORY OF Little Big Adventure

When people talk about French games from the Nineties, words like wacky, weird, creative and hard as nails quickly come to mind – all terms that apply perfectly to Little Big Adventure

Words By Paul Kautz

IN THE KNOW

- **PUBLISHER:** ELECTRONIC ARTS/ACTIVISION
- **DEVELOPER:** ADELINE SOFTWARE
- **PLATFORM:** PC, PLAYSTATION
- **RELEASED:** 1994
- **GENRE:** ACTION ADVENTURE

A Bigger Adventure

How Twinsen's Odyssey left little to be desired

DEVELOPER HIGHLIGHTS

ALONE IN THE DARK (PICTURED)
PLATFORM: VARIOUS
RELEASED: 1992

TIME COMMANDO
PLATFORM: PC, PLAYSTATION, SATURN
RELEASED: 1996

LITTLE BIG ADVENTURE 2
PLATFORM: PC
RELEASED: 1997

» [PC] Twinsen is the reluctant hero of the game. He was originally going to be called Twinkel, but the publisher didn't like that name.

The release of *Alone In The Dark*, at the end of 1992, was a big success for main designer Frédérick Raynal and his small team at Infogrames. It's no surprise then that the publisher wanted a "more of the same" sequel as soon as possible, but the exhausted developers had no interest in it. So they packed their bags, moved to Delphine Software International and opened the doors of Adeline Software.

A name that, incidentally, the four founders, Frédérick Raynal, Didier Chanfray, Laurent Salmeron and Yaël Barroz, had nothing to do with, as Frédérick told us, "Paul de Senneville was the chairman of the Delphine group. He had two daughters, Adeline and Delphine, who were the namesakes of Delphine Software and Adeline Software. The name of the company was the only thing that was not negotiable." According to Yaël, de Senneville's offer was simply too tempting to refuse, "It was a kind of offer that only comes along once in a professional life. We chose our team and our premises. We equipped everyone with the best computers and we had carte blanche to create! At the time, my salary more than tripled."

The basic concept for the new project, called *Little Big Adventure*, was done very quickly, but work did not begin until the spring of 1993, as Yaël recalls, "We were one of [PC hardware manufacturer] LDLC's first customers, but the machines took a while to arrive. So we started the *Little Big Adventure* meetings with modelling clay and note pads. Didier created the very first Twinsen with clay, which was then painted. He looked a lot like the Twinsen we know, except he had a huge nose."

Originally, the new adventure was going to be released on the PC and the then still hot Super Nintendo. But according to Frédérick, this plan was quickly scrapped, "We wanted to do both (PC and SNES) but as we started on PC, with high-res graphics (for this time) and many polygons, it became too much for the SNES. So we cancelled it after a few months."

Some 16 months later, *Little Big Adventure* was available in stores around the world under the Electronic Arts banner – although not everywhere under that name. In North America and Asia, for example, it was called *Relentless: Twinsen's Adventure*, which

Yaël Barroz

Yaël created all the scenario art for *LBA*. She then stayed in the games industry for a while, but left it in 2017 to focus on graphic design. You can find her current work on ytterbium.fr

Philippe Vachey

Philippe created all the wonderful music and sound effects that defined *LBA*. He still composes music for videogames and is now reworking his original *LBA* compositions for the remake.

Frédérick Raynal

Fred was the main designer and programmer of *LBA*. He still works in the games industry and is consulting on the *LBA* remake.

Benoit Limare

Benoit is one of the founders of 2.21 and the main developer of the *LBA* remake.

Didier Chanfray

Didier was responsible for all 3D objects and animations in the original game. He is one of the founders of 2.21 and is working on the current remake.

Immediately after the release of *Little Big Adventure*, there was a strong desire for a direct sequel – but the team, exhausted by the demanding development of the game, wanted to do something else first. Something smaller, a quick action game that could be in stores by Christmas 1995 without too much effort. That didn't work out, of course, as *Time Commando* wasn't finished until the end of July 1996, and it used an advanced 3D engine that took a lot of time to develop.

Little Big Adventure 2, released in June 1997, thankfully benefited from this, as it hardly justified the 'Little' in its name. The game was even more expansive than its predecessor, offering not only different islands to visit, but also different worlds. The story about Twinsen and Zoe (who is pregnant at the beginning of the game) was more ambitious and presented in even more elaborate render films. The soundtrack, once again written by Philippe Vachey, was a joy to the ears. The most important innovation compared to the first game, however, was the graphical difference between indoor and outdoor areas: When Twinsen moves inside buildings, *LBA 2* looks just as isometrically pre-rendered as its predecessor. But as soon as he steps outside, the world suddenly shines in detailed real-time 3D graphics – with flexible cameras angles, weather effects, and fully textured environments that offered a remarkable level of detail for the time.

In short, this was a very worthy successor, about which *Computer Gaming World* had this to say, "With its unparalleled sense of marvel and imagination, engaging story, and deft mix of action and adventure, *Twinsen's Odyssey* is a true delight and simply the most charming game I've ever played. Gamers who pass it by are depriving themselves of one of the most rewarding games of this, or any other, year."

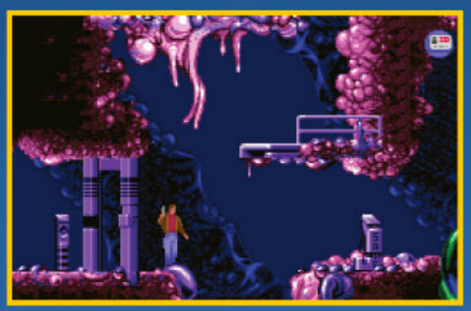
» [PC] *Little Big Adventure 2* was a much bigger game than its predecessor, featuring real-time 3D graphics outside of buildings.

Merci beaucoup pour le plaisir!

Five other very French games from the Nineties

Another World

■ Also known as *Out Of This World*, Éric Chahi's masterpiece defined the cinematic platformer as we know it today. Its brilliantly fluid animation, impressive world-building and wordless storytelling still make for a highly entertaining, if sometimes frustratingly difficult, experience.

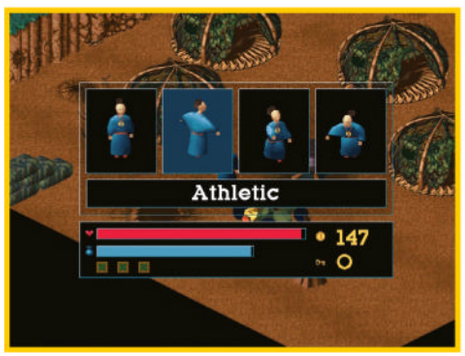


Flashback

■ Often touted as 'the sequel to *Another World*', even though it had little to do with it other than also being a cinematic platformer, *Flashback* was the quintessential French game of the early Nineties: beautiful to look at, difficult to play, and astonishingly creative.

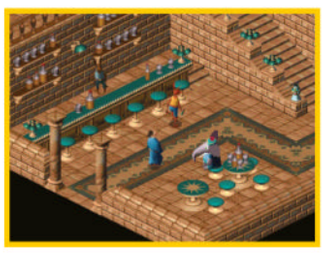
Gobliiins

■ In the *Gobliiins* series, you control a team of quirky, well, goblins, each with unique abilities, and solve a series of increasingly bizarre puzzles by constantly switching between them. A wonderfully strange game, presented in an incredibly imaginative art style by Pierre Gilhodes.



» [PC] Twinsen has four behaviour modes that you can switch between at any time.

» [PC] You should avoid fighting as much as possible. Twinsen is much weaker than most of his enemies and will be quickly overpowered.



▶ Frédérick says was a decision made by their American publisher Activision. "They thought that the original title didn't mean anything for them (too adventurish) and action titles were the best sellers."

However, the game's plot caused even more confusion than its name. The adventure takes place in Twinsun, where the hero Twinsen is plagued by unusual dreams in which he sees his world coming to an end. He carelessly mentions this in public, and soon finds himself in the captivity of the ironically named dictator Dr Funfrock. As cuddly as the world of Twinsun may seem at first glance, it is in fact a depressing place – for it has far more in common with George Orwell's dystopian classic *1984* than with a happy sunshine fantasy. Once upon a time, all the inhabitants of Twinsun lived in harmony with each other, until Dr Funfrock took power with the help of teleportation and clone armies, banished the entire population to the northern hemisphere of the planet and strictly forbade any thought of the deity Sendell. Those who, like Twinsen, even just think of her are likely to pursue these fantasies in the beloved leader's re-education asylums. The whole thing is as cute as it is depressing.

According to Didier, this stark contrast was planned from the beginning, "At the end of the Eighties and beginning of the Nineties there were political events that fed our imagination: Perestroika, the fall of the Berlin Wall, the end of Apartheid. A wind of freedom was blowing and bringing great hope, the decline of tyranny, dictatorships and oppressed peoples. At the same time, paradoxically, in France we were witnessing, election after election, the rise of the National Front represented by its openly racist and homophobic leader Jean-Marie Le Pen. Which made him the perfect profile for our antagonist. So we imagined a dictatorship led by Dr Funfrock. This tyrant has invented cloning and teleportation to enslave the people and take over the planet's magical powers. The cartoonish rendering, the talking animals, the magic ball, the bright colours, the funny sounds and the exaggerated animations all serve to lighten the seriousness of the issues raised, while at the same time drawing a caricature of totalitarianism."

> "It was a kind of offer that only comes along once in a professional life"
> Yaël Barroz

As a result, *Little Big Adventure* begins in prison, where at first you can do nothing but stand around. Only when a guard appears on a platform, shouting, "Stop squirming, prisoner Twinsen!" does the real game begin – and from that moment on, Twinsen's life is one big chase, always on the run from Funfrock's ever-present henchmen.

The most unique feature of *Little Big Adventure*'s game design is Twinsen's ability to change. He has four modes, which you can switch between at any time: the Normal mode (F1) sees Twinsen strolling around relaxedly, talking to people and getting extras such as coins or healing hearts from flowerpots, rubbish bins or furniture. In the Athletic version (F2), he gives Usain Bolt a run for his money,

Panza Kick Boxing

■ Realistic fighting games were rare in the early Nineties, especially those featuring real-life martial artists. *Panza Kick Boxing* brought kick boxing to life with unprecedented graphical fidelity and highly customisable fighters. Not the easiest fighting game to pick up, but incredibly rewarding.

Rayman

■ The game that made Michel Ancel a game-design superstar features a hero who is as happy as he is limbless as he traverses a vibrant comic world full of platforming challenges, strange creatures and a surprisingly high level of difficulty. The beginning of a popular, long-running series.

and can perform mighty leaps. Pressing F3 switches Twinsen to Aggressive mode, in which he growls like the Hulk, skips like Muhammad Ali and can deliver fierce punches and kicks. Finally, there is the Discreet mode (F4) where everything suddenly become very quiet, allowing Twinsen to duck or sneak past guards.

Speaking of which, there are exactly three ways to fight enemies: firstly, the aforementioned Aggressive mode, which is perfectly fine against unarmed enemies. Then there is the Magic Ball, which is a very handy tool. Not only can you use it to attack most guards from a safe distance, but it will also be upgraded several times throughout the game. You can also use the ball to retrieve distant items or operate switches. Weapon number three is the mighty sword, which you receive quite late in the game and will only really be needed in the grand finale against Dr Funfrock.

Until then, you should avoid Aggression mode as much as possible, as the combat is one of the weakest parts of the game. Twinsen is a really bad fighter and can only take a few hits, which means he will be downed with ease by most enemies. The good news is that these enemies are generally as stupid as they are slow, so it's much smarter to simply avoid them. Especially as they have a very limited range of action – if you stay out of their range, they are completely harmless.

This approach also makes the 'adventure' part of *Little Big Adventure* much easier to enjoy: the game features 12 seamlessly linked chapters with more than 120 locations you can visit. As you travel across the entire planet of Twinsun you will pass through cities with pubs, museums and residential buildings, talk to horses in the desert, sport your snowboard in the snowy heights of the Hamalayi Mountains, join a rebel commando and even become the unwilling centre of a rock concert. And all of this without a carrot dangling in front of your nose, as *Little Big Adventure* is, at its heart, an open-world game. Not only are there very few clues as to what to do next, but it is largely up to you to decide how to get there. So you have to work out your route from the sparse tips given to you by the townspeople, which inevitably leads to a lot of trial and error. From a technical point of view, *Little Big Adventure* is unusual in ▶

> "Political events fed our imagination"
> Didier Chanfray

» [PC] The second Twinsen leaves the asylum, he is constantly on the run.

» [PC] Twinsun is full of cute and quirky characters.

» [PC] Your Magic Ball is not only a useful tool, but also a powerful weapon that gets upgraded several times.

» [PC] *LBA* may look colourful and happy but don't let that fool you: the world is actually a dystopian nightmare.

▶ that it offers a very interesting mix of styles. Like its quasi-predecessor *Alone In The Dark*, the backgrounds are pre-rendered and static, while the characters are rendered in real time. Unlike *Alone In The Dark*, however, everything here is in SVGA (640x480 pixels), and the developers have done away with the constantly changing perspectives and present the entire game from a single viewpoint – a very clear 45-degree isometric perspective.

***LBA* also has a very unique look: on the one hand, the whole environment looks a bit like a toy world.** Everything is cuddly and playful and cute (though unfortunately a little lifeless: the trees don't sway in the wind, not a single wave splashes on the water). At the same time, the real-time characters are extremely imaginative and, for the time, impressively animated. Developing the graphics mix was a complex process, as Didier recalls, "For the isometric scenery, we used 3DSmax to model the 3D tiles, while the textures were drawn in Photoshop. To model and animate the game's real-time 3D characters and objects, as well as assemble the set bricks to create the terrains, we used in-house tools created by Fred. For the animated cutscenes we used Softimage software on Silicon Graphics computers."

This rather big than little adventure is accompanied by an excellent soundtrack by Philippe Vachey, whose imaginative compositions fit the game perfectly. This is despite the fact that Philippe finished the soundtrack while the game was still in development, as he told us, "I was used to making music with almost no playable game. I had a lot of drawings, the story outlines were defined, the first 2D/3D models started to appear – quite enough for me to create music. I remember that at the very beginning, I came to the brand-new Adeline studio, with a cassette tape and a single title on it. We all gathered in a tiny space, and we listened on Fred's ghetto blaster to what was going to become the *Little Big Adventure* title track. A great moment!"

In the end, it all came together to make a great game, which the contemporary reviews heaped with praise. The *Computer Gaming World* review opens with, "Some games are great because of their strengths, others in spite of their weaknesses. *Relentless* is a fine example of the latter," and ends with, "One of the most enjoyable games of the season." A few issues later, the game was voted Adventure Of The Year there, beating off strong competition such as *Death Gate*, *Ecstatica* and *King's Quest 7*. The *Edge* review, whose cover features Twinsen under the headline, "Adeline's triumph of the imagination," makes a similar case, "Rarely does a game arrive that combines technical innovation with diverse gameplay, humour and genuine personality. *Little Big*

> "I was used to making music with almost no playable game"
> Philippe Vachey

» [PC] Dr Funfrock is the game's main baddie. He's evil incarnate, but apparently quite the scientist.

"The name of the company was non-negotiable"
Frédérick Raynal

Adventure is quite unlike anything else." Edge's final score was an impressive 9/10.

After its original release, *Little Big Adventure* was also to be ported to the Atari Jaguar as part of a deal between Atari and Electronic Arts in 1995. However, this was cancelled when it became clear that this console would be a flop. What did appear, however, was a conversion to Sony's PlayStation, first in Japan in late 1996, and then in the rest of the world in March 1997. According to Didier, additional conversions were planned, "We considered the possibility of making a Saturn version, but the constraints were too great to overcome." Later on, even a version for the Game Boy Advance was in the works, he told us, "We did start work on the *LBA* port just after the release of *Moto Racer Advance*, but the economic situation wasn't very good in the Delphine group and we had to stop." *Little Big Adventure* sold around 500,000 copies across all systems. A decent figure for such an unusual game, which meant a sequel *Twinsen's Odyssey* followed in June 1997 (learn more about it in the A Little Bigger panel).

This was the last time the name *Little Big Adventure* was heard for a long time. A third game, subtitled *Genesis Of The Stellar Entity*, was in the works several times, but the funding never worked out. Adeline Software was closed down in 1997, reborn as No Cliché shortly afterwards, and shut down for good in 2004 after two relatively unsuccessful Dreamcast exclusives, *Toy Commander* (1999) and *Toy Racer* (2000).

In 2021, all rights to *Little Big Adventure* were transferred to 2.21, a company founded by Didier Chanfray amongst others, who renamed the game *Twinsen's Little Big Adventure Classic* (to avoid similarities with *LittleBigPlanet*), published the source code of *LBA 1&2* on Github and announced official remakes – more on this in the Little Big Potential panel.

Until they are released, you still have plenty of time to enjoy the original *Little Big Adventure* – which is still worth playing today, despite all its shortcomings. If you were to play *Little Big Adventure* for the first time today, it would be understandable if you gave up quickly in frustration. But if you did, you'd miss out on a real gem – full of ideas, innovation, charm and soul that is all too rare in games these days. Or as Didier put it, "Of course, the game has aged a lot, especially in terms of game design and feel. Despite everything, I still find it very charming."

Little Big Potential

How fans and original devs are bringing LBA back to life

"*LBA 2* was one of my favourite games as a child, Benoit Limare, cofounder and CEO of 2.21 tells us. "I used to play it a lot with a classmate of mine when I was eight years old, which led me to the discovery of *LBA 1* – which I consider a hidden gem! Most young players don't know about it. With Didier Chanfray, we wanted to make a comeback that has a chance of reaching new players." As a result, 2.21 has been working since early 2023 on the official remakes of *Little Big Adventure 1&2*, which will be released on PC and consoles in 2024 and distributed by Microids. The company is made up of six in-house developers, including Didier Chanfray and Sébastien Viannay, one of the original programmers and several freelancers, including Frédérick Raynal (consulting) and Philippe Vachey (music).

The games will not simply be reworked and ported (as was the case with *LBA 1*'s conversion to mobile devices in 2014), but redesigned from the ground up as a true remake – which, as Benoit explains, is not without its challenges, "Most of what was done in the Nineties was a balance between what the team wanted and what was technically possible. For example, in *LBA 1*, all exterior scenes have the exact same size and have a limited height. All scenes are limited by 'black borders'. We decided to break these borders and create a unified outdoor environment for each island." Work began using Unreal Engine 5, which turned out to have problems with the original 3D geometry, so development was switched to the Unity engine in August of 2023.

According to Didier, there is a lot to look forward to, "I'd like to take this opportunity to thank the *LBA* fan community very much for their feedback and great patience – we're almost there! We're doing everything we can to ensure that you won't be disappointed by keeping the spirit of the game intact, while offering a new gaming experience capable of introducing new players to this beautiful universe that's so special to our eyes and hearts."

You can find out more about the development of the remakes by visiting littlebigadventure.com

» [PC] The remakes follow the general structure of the original games, but will greatly expand on them and put them in a sweet new graphical style.

1P
901
LIFE
EXP
1

Panorama Cotton

I'VE NO ISSUE WITH REISSUES

» MEGA DRIVE » 1994 » SUCCESS

When it comes to shmups, I'm not really fussy on what type of shooter I play. I like all subgenres of the genre, whether it's into-the-screen shooters like *Space Harrier* or arena-based blasters like *Robotron: 2084* – if you can shoot things, I'm generally quite happy.

Panorama Cotton has been on my wish list ever since I owned a Mega Drive. Developed by Success and part of its long-running *Cotton* series, like *Space Harrier*, it's an into-the-screen blasting extravaganza; but unlike *Space Harrier*, it's not quite as polished.

The reason for this is twofold. Firstly, Success' success in converting its popular series into a new dimension doesn't feel as mechanically accomplished as it could be. Secondly, the poor old Mega Drive simply doesn't have the grunt required to make Success' game an intense, fast-paced blaster (*Space Harrier II* suffered from similar issues on the system).

And yet I've always wanted to own *Panorama Cotton* as, even with its problems, it remains an incredibly impressive-looking shmup for Sega's 16-bit system. Sadly, it's also an extravagantly expensive one and with prices constantly finishing north of £1,000 I could never justify a copy of the game. That was until it was reissued by Strictly Limited Games.

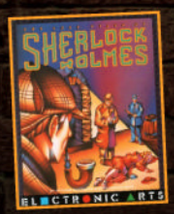
After missing the original orders at Strictly, I sourced a copy from Videogamesplus.ca and was delighted to finally add *Panorama Cotton* to my collection. It's certainly lacking mechanically compared to the side-on *Cotton* games, but it looks lovely and it becomes a lot more palatable once you get used to the somewhat choppy framerate. Seeing the Mega Drive pull off this sort of tech is crazy and while it's not without its faults it's technically more proficient than the aforementioned *Space Harrier II*.

I've seen a lot of people complain about reissued carts from the likes of Columbus Circle, Strictly Limited Games and Limited Run Games, calling them nothing more than expensive bootlegs. Personally I think that's a ridiculous claim. Any company that is making a prohibitively expensive game available to a new audience is great news, particularly if it's allowing me to add legitimate copies of games to my collection that I could otherwise never own.

THE MAKING OF THE LOST FILES OF SHERLOCK HOLMES

SHERLOCK HOLMES' UNIQUE CHARACTER IS HARD TO CAPTURE, BUT EA'S TWO GRAPHIC ADVENTURES BRING ARTHUR CONAN DOYLE'S DETECTIVE TO VIVID LIFE. DON YOUR DEERSTALKER, HAIL A HANSOM CAB, AND SHARPEN YOUR DEDUCTIVE SKILLS AS YOU SOLVE THESE LOST FILES FROM HOLMES' ARCHIVE – THE GAME'S AFOOT…

WORDS BY GEM WHEELER



IN THE KNOW

- **PUBLISHER:** ELECTRONIC ARTS
- **DEVELOPER:** MYTHOS SOFTWARE
- **PLATFORM:** MS-DOS, 3DO
- **RELEASED:** 1992, 1996
- **GENRE:** GRAPHIC ADVENTURE

ERIC LINDSTROM

» Eric was heavily involved with the *Serrated Scalpel* and has more recently published two successful Young Adult novels.

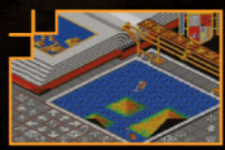
On paper, point-and-click adventures and detective mysteries seem to go together like Holmes and Watson. Suspects to grill; clues to chase; tiny pixels to, er, squint over until you discern the vaguest shape of a key: a perfect match, surely?

Rather surprisingly, the crime-solving capers from adventure gaming's Nineties heyday tend to be overlooked in favour of the kings, pirates, and wisecracking cartoon animals that everybody remembers. (It's worth noting that Sam and Max were Freelance Police, though.) Delphine Software gave us the Christie-influenced *Cruise For A Corpse*, while fellow French developers Lankhor created the innovative – and infamously difficult – *Maupiti Island*. Sierra On-Line's *Gabriel Knight* trilogy and Access Software's *Tex Murphy* adventures lent the genre a touch of Chandleresque grit, as, with a comic twist, did Perfect Entertainment's criminally underrated *Discworld Noir*. Then, of course, there's Sierra's charming, 1920s-set *Laura Bow* games and the by-the-book *Police Quest* procedurals.

Electronic Arts, it has to be said, isn't the first company that comes to mind when discussing classic adventures from the Nineties. And yet, two of the very best detective games of the era were published by EA. Mythos Software's *Lost Files Of Sherlock Holmes* series is remembered with enormous fondness not only by gamers but by Holmes enthusiasts more generally, who cherish the witty, authentic dialogue and rich atmosphere to be found in 1992's *The Case Of The Serrated Scalpel* and its 1996 follow-up, *The Case Of The Rose Tattoo*. While each game features the much-loved characters familiar from Arthur Conan Doyle's creation – tetchy Inspector Lestrade and his rival, Inspector Gregson; Wiggins, a smart street kid who heads the trusty Baker Street Irregulars; even Toby, the dauntless bloodhound – the stories are original cases, too sensitive for Watson ever to publish his diaries. Corruption in high places, scandalous liaisons, kidnap and, of course, murder: it's the stuff of Doyle's most thrilling tales.

> "I OFTEN FEEL THAT READING CLASSICS REQUIRES A CERTAIN LENS FOR SEEING THEM IN THE CONTEXT OF THEIR DAY, BUT I WAS SURPRISED TO FIND HOW THE STORIES HELD UP – I LOVED ALL OF IT"
>
> ERIC LINDSTROM

RJ Berg, later to become creative director at LucasArts, was responsible for the games' engrossing conversations and extensive, beautifully written descriptions, while Eric Lindstrom crafted the satisfyingly complex mystery on which *Serrated Scalpel*'s structure hinged. Eric's been nominated for BAFTAs and Writers' Guild Of America awards for his



DEVELOPER HIGHLIGHTS

POPULOUS (PICTURED)
PLATFORM: AMIGA, ATARI ST, PC, MEGA DRIVE
RELEASED: 1989

ULTIMA VII
PLATFORM: PC, SNES
RELEASED: 1992

WING COMMANDER: PRIVATEER
PLATFORM: PC
RELEASED: 1993

» [PC] Rugby provides a surprising diversion as you search for clues in *Serrated Scalpel*.

» [PC] Not the most helpful response, but try other ways to get the information you seek.

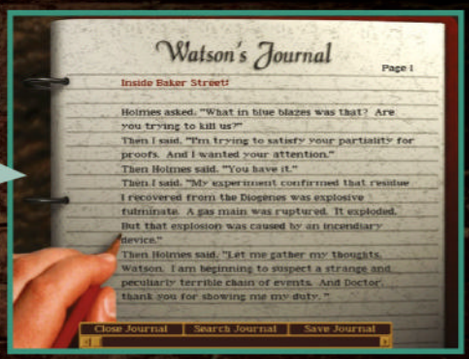
work on games such as *Tomb Raider: Legend* and *Tomb Raider: Underworld*, plus he's also published two successful Young Adult novels. He remembers his time at EA, and his work on *Serrated Scalpel*, with great fondness.

Before building that mystery, however, he got his start on a very different title. "I had recently finished an RPG called *Hard Nova*, my first work in narrative design. The game was deep in development when I encountered it, with a story and characters but not well put together or written. This was unsurprising since it wasn't written by a writer, which was common in those days. I was a writer at Electronic Arts – instruction manuals, clue books, marketing and PR copywriting – and I saw the potential for *Hard Nova* (which wasn't named that yet) to be a lot better, so I offered to come in and redo it from scratch, using the existing character art and locations. This involved creating a new unfolding story and then designing and writing all the dialogue trees for players to navigate through it. They agreed, and we were all happy with the result.

"This was for producer Christopher Erhardt, and I heard that he was in the early stages of a *Sherlock Holmes* game and asked to take a look. They had generated a lot of art with the aim of making a game like *Clue* [known as *Cluedo* in the UK],

TOOLS OF THE TRADE

HOLMES USES VARIOUS SKILLS TO SOLVE A CASE


Watson's Journal
Page 1
Inside Baker Street!
Holmes asked, "What in blue blazes was that? Are you trying to kill us?"
Then I said, "I'm trying to satisfy your partiality for proofs. And I wanted your attention."
Then Holmes said, "You have it."
Then I said, "My experiment confirmed that residue I recovered from the Diogenes was explosive fulminate. A gas main was ruptured. It exploded. But that explosion was caused by an incendiary device."
Then Holmes said, "Let me gather my thoughts, Watson. I am beginning to suspect a strange and peculiarly terrible chain of events. And Doctor, thank you for showing me my duty."
Close Journal
Search Journal
Save Journal

WATSON'S JOURNAL

The good doctor is the Boswell to Holmes' Dr Johnson, meaning that he has the honour of jotting down all the master detective's shrewd insights. The search function comes in really handy in keeping track of your investigation, especially once the case starts to get complicated.

CHEMICAL ANALYSIS

Subject evidence to thorough scrutiny on Holmes' lab table, which is well equipped with all the chemicals and tools you'll need in this age before forensics. Do be a bit careful with the flammable stuff, though… Mrs Hudson's nerves, and carpet, have been tested enough.

Press any Key to Continue.
J.P.V.D. Ralston's classic "Griffin Rampant", an exhaustive survey of the subtle influence which Anglo-Saxon coats of arms exerted on moribund Norman heraldic traditions in the reign of William Rufus.

EXAMINING EVIDENCE

Holmes' trusty magnifying glass gets plenty of use as he inspects corpses, crime scenes and various objects for clues. Fingerprint testing is still in the future, but stray hairs, cigarette ends and fabric samples are all worth collecting.

1. Might we look at Mr. Pratt's effects? It can make no difference to the deceased.
2. Are you familiar with any of Mr Pratt's haunts, clubs, saloon bars, salons, and such?
3. Did Mr. Pratt have any special friends?
4. Do you have a likeness of Mr. Pratt in your flat

QUESTIONING SUSPECTS

This is an adventure game, so talking to anybody you can click on is always a good idea. Select a numbered question to pursue a line of enquiry and enjoy Holmes' sardonic barbs. Watson will usually step in when he starts to get really annoying…

DARTS

Yes, really. What do you mean, darts aren't part of a detective's arsenal? This minigame requires a level of precision with the spacebar that only our dad could achieve when we played this 30 years ago. You've got a lot to live up to there, Sherlock…

ADAPTING HOLMES

HOLMES HAS APPEARED IN MANY FORMS…

SHERLOCK HOLMES: SECRET OF THE SILVER EARRING

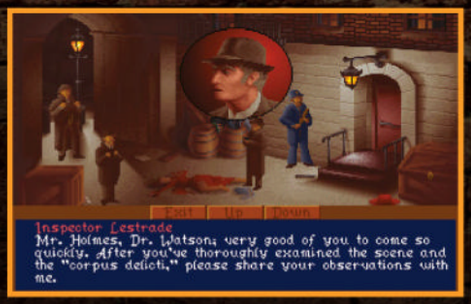
This is a charming adventure, let down by an ending that cheats us of solving the crime ourselves (as Eric Lindstrom notes, it's a tough line to tread when adapting Holmes for adventure gaming purposes). It's the very beginning of a long line of Frogwares titles…

SHERLOCK HOLMES: THE AWAKENED

Mix Holmes with the Cthulhu mythos, you say? Well, why not. This 2008 Frogwares adventure pits him against a Lovecraftian cult, which feels weirdly appropriate. *The Hound Of The Baskervilles* has nothing on this scenario… watch out for the tentacles, Sherlock.

SHERLOCK HOLMES: CRIMES AND PUNISHMENTS

This stylish 2014 adventure saw Frogwares (yes, it has cornered the market in *Holmes* adaptations) take detective puzzling in an interesting new direction. Memory palaces and missing links abound in this set of cleverly intersecting mysteries, which build to form a satisfying whole.


Exit
Up
Down
Inspector Lestrade
Mr. Holmes, Dr. Watson; very good of you to come so quickly. After you've thoroughly examined the scene and the "corpus delicti," please share your observations with me.

» [PC] Unfortunately, Lestrade's theories about a case don't always align with yours.

Exit
Up
Down
The Bartender
My name's Taggart, but I'm no information bureau. I've got customers to serve. In any case, I see very little; hear even less; and generally talk about it not at all.

» [PC] Animated portraits appear during conversations in the MS-DOS version of *Serrated Scalpel*.

» [PC] The opera house is one of the more salubrious locations you'll end up visiting.

» [PC] The verb-based interface is an intuitive method of navigating Holmes' world.

SHERLOCK HOLMES VERSUS JACK THE RIPPER

It's not spoiling anything to say that Lestrade is wrong about the Ripper's possible involvement in *Serrated Scalpel*, but Holmes overcomes his disdain for investigating the serial killer's methods for this adventure. It has won praise for its evocation of Victorian Whitechapel.

THE TESTAMENT OF SHERLOCK HOLMES

No mystery about who developed this 2012 outing… Frogwares take Holmes in his darkest direction yet, as the legendary detective finds himself a suspect in a tortuously complex case. Can his friendship with the loyal Watson see him through this ultimate test? Let's hope so…

» [PC] Travel around the map screen using the cutely animated horse and carriage.

» [PC] Holmes can always rely on Watson to do two things: cheerlead for him and take notes.

with different locations instead of rooms, that sort of thing, but didn't have the rule set completely worked though. I saw that they had the basis of a more ambitious game, a full graphic adventure, which wouldn't require many more art assets. So I made the same offer as for *Hard Nova*, to come in and create a story and puzzle tree to make *Sherlock Holmes* a graphic adventure, and they agreed."

Most people have their favourite take on Sherlock Holmes: right from Sidney Paget's striking illustrations, which accompanied Doyle's stories in *The Strand Magazine*, the master detective has always cut a distinctive figure. Basil Rathbone's film version of the character is peerless in many eyes, though Benedict Cumberbatch and Jonny Lee Miller have both won fans in the recent TV adaptations, *Sherlock* and *Elementary*. Eric's personal favourite, however, made an indelible impression on British TV between 1984 and 1994.

"At the time (and still) I loved the Jeremy Brett depictions of Sherlock Holmes, with all his flaws and unheroic characteristics," says Eric. "I had no interest in other depictions and paid them little attention; in fact, I thought Holmes was not an interesting character because of how he was depicted. It was the Jeremy Brett series that made me change my mind. I was very excited to be able to do something that I felt was authentic to the character… yet I actually hadn't read the original stories. So the day I was given the green light to transform the *Sherlock Holmes* game into a graphic adventure, I bought a copy of the full canon – every *Sherlock Holmes* story and novel in one volume, and I stayed home from work for a couple of days to read it straight through cover to cover. And I was blown away. I often feel that reading classics requires a certain lens for seeing them in the context of their day, but I was surprised to find how the stories held up – I loved all of it."

> "THE IDEA OF A SPOILER FOR A GAME THIS OLD IS FUNNY, BUT I STILL WON'T SAY WHAT THE MEANING OF THE SERRATED SCALPEL WAS"
> ERIC LINDSTROM

Eric was faced with an immediate problem, as any fan of Doyle's stories will deduce; what's 'elementary' to the master detective himself could turn out to be an impossible case for the rest of us. The last-minute, rabbit-in-the-hat revelations as Holmes wraps up an investigation are all part of the fun, but how to translate that into the context of a game? "I set out to try to make a framework for how a player could solve a Sherlock Holmes-level mystery without being the brilliant Sherlock Holmes," Eric says. "The stories are not whodunnits – they are mostly written in a way that's impossible for readers to work out who the culprit is, because the information needed is inaccessible. Holmes is lauded for his logic, which is the basis for a reader solving a mystery on their own, but his biggest tool and secret to success as a detective is knowing an immense amount of mundane information and being able to apply it to cause and effect. He could look at flecks of ash on a table, instantly recognise the type of tobacco it came from, and know that it could only come from two sources in town, or, by looking at the nature of tiny scratches next to a keyhole, know that the [house's] occupant was a frequent drinker. And in the stories, Holmes often didn't reveal these bits of info until the end when explaining his conclusion."

Eric hit upon a clever solution. "By 'being' Holmes, walking around London, the narrative voice, that of Holmes, would fill in the specialised information – which is his expertise – but not the connections or logic, which could be left to the player. So when the player examines a door, the description given would be in Holmes' voice, with him musing on the information that the scratches on the keyhole not only suggest an occupant who drinks a lot but are biassed to one side, to suggest the occupant is left-handed. This is information Holmes would observe and conclude that Inspector Lestrade would pass right over," Eric explains. "Obtaining the information of who lived there and

» [PC] Holmes and Watson on home turf outside 221B Baker Street, ready for action.

» [PC] Holmes rushes to save his brother Mycroft from an explosion at the Diogenes Club.

» [PC] Getting a monkey to do your dirty work for you? Not very sporting, old chap.

Stop, I beg you. You are a radical. Your husband is a tosspot; your progeny engage in activities of dubious legality. None of that concerns or interests me at the moment.

» [PC] Sometimes, the direct approach is the only way to move a conversation along.

connecting their drinking and their left-handedness to the mystery could be left to the player. And that was the start: the idea of how to make a graphic adventure mystery of a crime only Holmes could solve yet give players the means to drive the solution themselves." *The Lost Files* games, therefore, allow the player to hunt for clues and question witnesses in 1880s London using an intuitive verbal interface that yields detailed descriptions of objects and people.

Eric picks up the trail again. **"Next, I created the mystery – I didn't 'write' it because that's not how narrative design works.** It's more of an outline of the events and connections and clues and how they fit together. It started with a scalpel murder in an alley, but Holmes observes that the wounds suggest the scalpel had a serrated edge – very unusual – and off we go. The idea of a spoiler for a game this old is funny, but I still won't say what the meaning of the serrated scalpel was.

"So I put together the framework, wanting to include key elements of Holmes' world like Toby and the Baker Street Irregulars, while avoiding TV and movie cliches about Holmes that weren't canon and working out how the clues would lead the player forward: unlocking new locations, where new dialogue options would open up when clues were discovered by the player's actions, explained by Holmes as isolated pieces of info, and so forth. There was a tricky line to walk with dialogue trees, in how to make them such that the very existence of a new question didn't give everything away, but that's a challenge for dialogue-heavy graphic adventures generally, not just Sherlock Holmes."

Juggling his various priorities as head of the writing group involved essentially moonlighting on different jobs, so – realising that *Serrated Scalpel* was just too big a workload – Eric reached out to RJ Berg, a huge fan of Doyle's creation. "He was the prior head of the writers, and I replaced him when he moved over to production, so I knew him to be not only an excellent writer, but someone who would be on the same page with respect to depicting Holmes and his world authentically, not in a clichéd or stereotypical manner. He loved the idea and could carve out the time to do it.

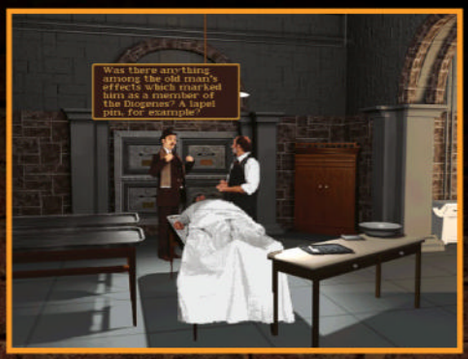
"We had a period of transition where I brought RJ up to speed on all the history of the project, my thinking and philosophy of the approach, and the framework outline for *Serrated Scalpel*, and then the writing of all the actual descriptions and dialogue started, the project solidly in RJ's hands. We worked together in the

"I WAS CREDITED AS ORIGINAL STORY AND RJ AS GAME DESIGN, WHICH IS FUNNY BECAUSE THE REALITY WAS MORE COMPLICATED"
ERIC LINDSTROM

writing group for years, but on *Sherlock Holmes* we didn't overlap all that much. I was credited as original story and RJ as game design, which is funny because the reality was more complicated. I did a lot more than 'write' the original story – I did the original game design, coming up with the framework by which the game would progress, but then RJ did a lot of game design after that by working through the actual implementation and all the decisions and details that entails, and likewise RJ did a lot more than game design as he was the one who actually wrote every word of the game's dialogue and descriptions."

***Serrated Scalpel*'s successor, *Rose Tattoo*, swapped the VGA graphics of the series' opening instalment for in-game video featuring actors performing against a blue screen.** Once again, its story was a satisfying blend of Holmesian lore and original storytelling, set against a late-19th-century backdrop even more detailed than the original. By then, however, Eric had moved on from EA to a role as game designer at Crystal Dynamics.

"I had nothing to do with *Rose Tattoo* – RJ did that after I left – and I was deep in other projects and targeting other platforms, so I didn't even own a machine that would play *Rose Tattoo*, and I've never done so. I actually never played *Serrated Scalpel* for similar reasons – when it shipped I was in console space and didn't even have a PC at the time… besides, 'playing' a game you worked on is very different than a player's experience, especially for puzzle games. Make a *Call Of Duty* and it's fun to play yourself, but puzzle games, not so much. I do remember good press for *Serrated Scalpel* from the time and also some backlash about how it led players by the nose too much, but I chalked that up to the nature of the game – it was the best that set of goals and constraints could manage then, and anyone who wanted more freedom and less guidance probably just wanted a different game. No game is for everyone." Wise words – and those who relish a complex, well-plotted mystery won't regret their hours spent solving *The Lost Files Of Sherlock Holmes*.



» [PC] With Holmes out of action, Watson does a bit of digging of his own.

» [PC] Augie's card game is a con, but exposing him might get you into Scotland Yard.

UNDER INVESTIGATION

HOLMES TAKES A TURN ON THE 3DO

Both *Lost Files* games were released in MS-DOS format, but the first instalment in the series – *The Case Of The Serrated Scalpel* – got a 3DO conversion. Not surprising, given that The 3DO Company was founded by Electronic Arts' Trip Hawkins in 1991. The 3DO *Serrated Scalpel* appeared in 1994, two years after the PC release, and has differences from the original game which make it worth a look for adventure gaming completists.

While the background graphics are very similar, the 3DO version's most striking feature is the replacement of the VGA character portraits with fully voiced video of actors playing Holmes, Watson, and the supporting cast. Initially jarring if you've played the original first, the sprightly performances keep things engaging and bridge the gap with the blue screen-heavy 1996 follow-up, *The Case Of The Rose Tattoo*. Smaller changes include different fonts and folding text menus, but otherwise, it's a straightforward conversion with an identical plot and characters. (Watson's journal seems to have gone astray in the transition to video, though.) The observant will notice that the audio in the cutscenes, which were also voiced for MS-DOS, have been re-recorded with the new cast. Lestrade would never have spotted that, you know.

EMULATION NATION

FIRST CONCEIVED TO MAKE MAINFRAME COMPUTERS BACKWARDS COMPATIBLE, EMULATORS LATER PROVIDED A WAY TO RUN OLD GAMES ON NEW SYSTEMS. DEVELOPERS METALLIC, CARSTEN WAECHTER AND HIKARI NO YUME DISCUSS EMULATION AND PRESERVING VIDEOGAME HISTORY

WORDS BY RORY MILNE

In 1962, IBM had a major problem. Its cutting-edge System/360 mainframe computer series wasn't compatible with software designed for its older 7070 models. After attempts by others failed, engineers Larry Moss and Stuart Tucker found success with a hybrid software/hardware project they called The 7070 Emulator.

Decades later, similar approaches resulted in accessories that made the C64 behave like an Apple IIe and allowed the ST and Amiga to run PC software. Then in the early Nineties, Sega developer Yuji Naka created an in-house NES emulator for the Mega Drive, and Argonaut Software developed a Game Boy emulator for the Amiga for internal use.

> "THE AUTHOR OF NUANCE PASSED AWAY, BUT THE SOURCE CODE WAS ONLINE FOR SOMEBODY ELSE TO PICK UP. NOBODY HAD, SO I THOUGHT HOW HARD COULD IT BE?"
>
> CARSTEN WAECHTER

The first console emulator aimed at a public audience appeared in 1994, in the form of the MegaDrive Emulator for the PC, with others following, including a *Pac-Man* emulator that evolved into MAME. By the late-Nineties, websites hosting emulators and games to play on them were commonplace, but in 1998, many shut down after legal threats from an organisation representing the games industry.

The following year, Sega published a Mega Drive compilation for PCs that used a modified version of a publicly available emulator, and Capcom released emulated versions of its original *Mega Man* coin-ops for the PlayStation. As the 21st century unfolded, emulators for numerous platforms appeared online, and with that the opportunity arose to preserve their games libraries.

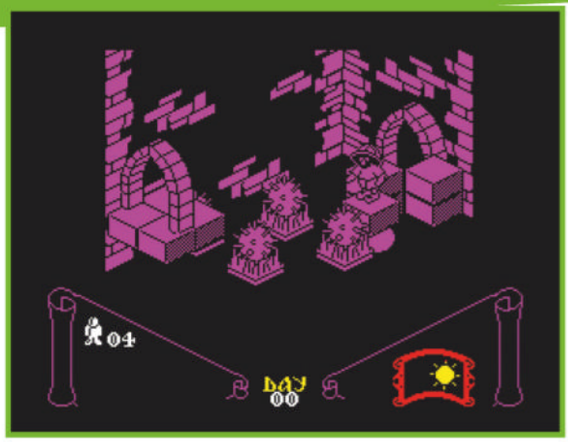
Arguably, the most ambitious project is MAME, which emulates hundreds of vintage coin-ops, computers and consoles. Then there are bespoke emulators like DEmul, which supports newer systems like Sega's Dreamcast and certain polygon-based coin-ops. A crucial contributor to both projects goes by the pseudonym MetalliC, and he remembers the process of getting into emulation development being quite organic. "The DEmul team noticed that I might be someone who could be useful, so they invited me to join them," MetalliC explains. "My motivation for working on DEmul wasn't that I was a fan of console gaming at all, but the guys said that I could do whatever I wanted on the project, so I was OK with that. As for MAME, I had been submitting many Russian gambling machine-related things to MAME, and later Sega-related stuff too, so it was a practical

» [Arcade] Originally a *Pac-Man* series emulator called Multi-Pac, MAME went on to support numerous coin-ops.

» [Atari 2600] Stella was one of the earliest Atari 2600 emulators, and it's still one of the best.

» Carsten Waechter resurrected the emulator Nuance years after the sad death of its original developer.

» [C64] As well as the hugely popular Commodore 64, VICE supports various other 8-bit Commodore computers.



» [ZX Spectrum] Aside from emulating the Spectrum series, Fuse supports a number of its clones.

» [NES] The highly accurate NES emulator puNES has a cool rewind feature for when you mess up.

and reasonable decision to include me in what they were doing."

In terms of the improvements MetalliC made to DEmul, he began by better accommodating coin-ops with steering wheels and other exotic controls. "When I joined the DEmul team, the only *really* playable arcade titles were ones that used standard sticks and buttons," MetalliC notes. "So I started by implementing an input ports subsystem that mapped non-standard control devices such as racing wheels, pedals, lightguns, baseball bats, fishing rods and touchscreens to the host PC's input devices: its gamepad, keyboard and mouse. There was also a lot of other work that I did on DEmul. For MAME, I documented Sega arcade games from the late-Nineties and 2000s, Soviet-era arcade games, later arcade gambling machines made during the post-Soviet era and some 8-bit computers that I'm familiar with."

The route into emulator development taken by Carsten Waechter was quite different, not only because he works alone, but also because he's resurrecting an abandoned emulator. "I collect retro consoles, and it's very difficult to find a Nuon," Carsten points out. "It's even more difficult to find controllers for it, and the games for the console. So I thought that before I went for it I would look at what the current state of Nuon emulation was. To my surprise, it was in exactly the same state as it had been ten or 15 years ago when I had last checked. The author of the emulator Nuance had passed away back then, but to my surprise the source code was out there because the author's parents had put it online for somebody else to pick up. Nobody had, so I thought how hard could it be to resurrect it?" ▶

EPIC EMULATION 1989-2000

SUPERB SHOOTERS THAT ARE TRICKY TO PLAY WITHOUT EMULATORS

ATTACK OF THE MUTANT CAMELS '89

Jeff Minter's Konix Multi-System exclusive was long considered lost, until after years of effort an emulator of the unreleased console was released alongside a demo of Jeff's work. As you might imagine, *AMC '89* is both an intense shooter and a psychedelic assault on the senses. It's more easily accessible via *Llamasoft: The Jeff Minter Story*.

TEMPEST 3000

The short-lived Nuon console was built into DVD players that are now rare and costly, which makes Jeff Minter's incandescent Nuon shooter tricky to play. Thankfully, it's supported by the Nuance emulator, which has recently been reworked to make *Tempest 3000* run at full-speed. This is very good timing as the game is being re-released physically by Songbird Productions.

PLANET HARRIERS

Although it was previewed in the UK press, *Planet Harriers* was pretty much a Japanese exclusive, and is even harder to find now. The Sega coin-op is, however, playable via the DEmul emulator, making the polygon-powered *Space Harrier* follow-up available to a worldwide audience. Just keep in mind that it doesn't run perfectly.

EPIC EMULATION 2001–2007

MUST PLAY GAMES THAT EMULATORS ARE HELPING TO PRESERVE

JET SET RADIO FUTURE

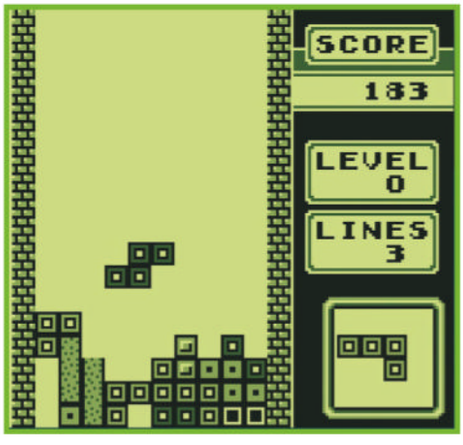
Considering that some Xbox games don't run at all on the Xemu emulator, it's fortunate that this standout system exclusive plays pretty much perfectly. Sega's sequel is bigger and better than the Dreamcast original, and delivers more skateboarding and graffiti-tagging thrills.

WILD RIDERS

Released as arcade gaming waned, *Wild Riders* continued Sega's proud tradition of making superlative coin-op racers. Although all but forgotten now, this cel-shaded gem runs on DEmul, giving a fresh opportunity to jump insane distances over its ramps while outrunning its cops.

MAZAN: FLASH OF THE BLADE

Namco's first-person hack-and-slash is a unique experience, but anyone who blinked would have missed its 2002 arcade debut. *Mazan* is best described as *The House Of The Dead* with a samurai sword controller instead of one like a gun. It runs on DEmul, and with some effort a Wiimote.



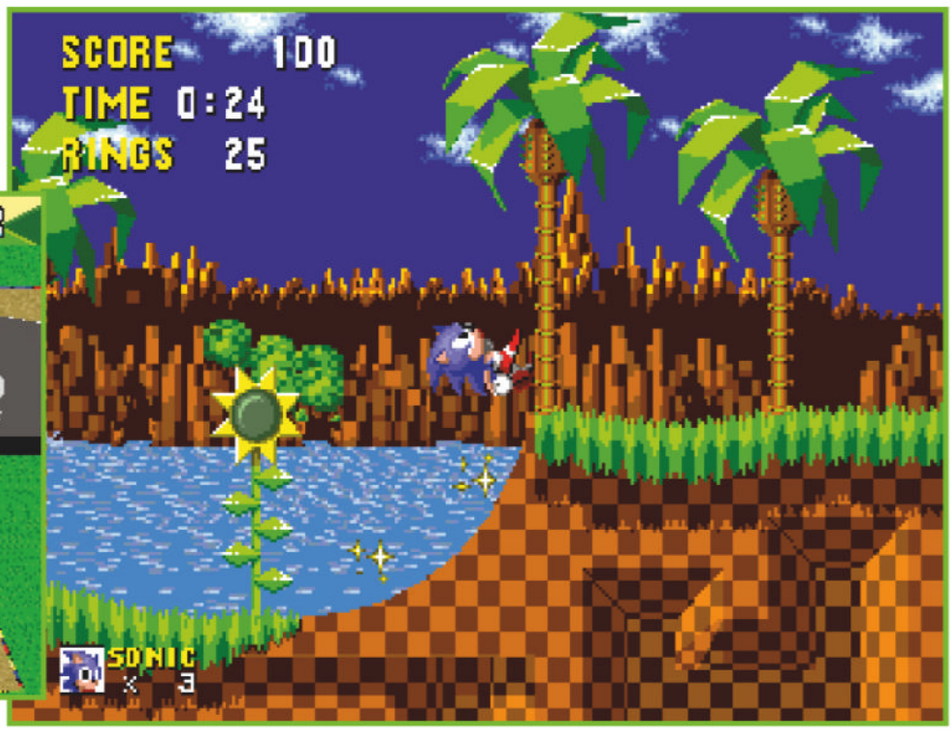
» [Game Boy] In addition to the Game Boy, SameBoy emulates Nintendo's Game Boy Color and Super Game Boy.

As things turned out, time had been kind to Mike Perry's emulator Nuance, so much so that it fuelled Carsten's optimism for reviving it for current platforms. "I compiled the source code on a modern compiler, and surprisingly it was pretty easy to get going. Then I was hooked," Carsten enthuses. "As soon as it compiled I tried it. Of course, computers are much faster now. That was the next surprise; I had expected all sorts of weird sync issues, because the last time I had tried Nuance it was like watching a slide show. But its developer Mike Perry was apparently a genius because it basically just worked. Of course there were all kinds of glitches and tiny bugs, and stuff that didn't show up, but in general it worked."

By this point, Carsten was committed to reworking Nuance for modern systems, and in particular he wanted to get the Nuon's killer app to run perfectly on it. "I thought I'd look into this glitch and then that one, and then at some point I convinced myself that I was going to get *Tempest 3000* to work!" Carsten exclaims. "That was my main motivation. I thought how hard could it be to fix all of the bugs that were preventing it from displaying it correctly? That was OK, it was manageable. Since then there's this one timing bug that I can't track down. I even contacted Jeff Minter directly, but unfortunately he didn't reply."

A developer working under the pseudonym Hikari No Yume was similarly inspired to emulate a specific game – the iOS version of *Super Monkey Ball*, after noticing that it was

» [SNES] A focus on leveraging modern tech makes bsnes a speedy and accurate SNES emulator.



» [Mega Drive] Not only is ares one of the best Mega Drive emulators, it also supports a wealth of other systems.

» [PC] It's been around for decades, but DOSBox is still a great option for emulating early PC games.

» [Arcade] Unlike MAME, Supermodel offers fast and near flawless emulation of most Sega Model 3 coin-ops.

» [PlayStation] The feature-rich PlayStation emulator DuckStation allows for cool tricks such as upscaling.

no longer playable. "In 2009, when I was 14 years old, I got an iPod Touch," Hikari notes. "I had fond childhood memories of playing various games on that, and for a very long time you could still play them on modern phones, but then Apple killed support for any that weren't updated by some point. Then in 2021, I saw a trailer for a new *Super Monkey Ball* game from Sega. It had a timeline of the series, and the only title that I had played was for the iPhone, and it wasn't listed. I realised it was impossible to play it on modern devices, and that was where the seed of the idea for touchHLE came from."

In late-2022, Hikari began pouring time and effort into developing an iOS emulator. Others have joined the touchHLE project since, but there are limits to their ambition. "The approach I took uses a system that I've designed that doesn't actually run iOS or emulate it at all," Hikari explains. "It basically just runs the game, and therefore my emulator has to replace everything that iOS does. It worked for *Super Monkey Ball* because there are only a few hundred things that it asks iOS to do, and I could replace those few hundred things in the emulator. It can also run games that request a similar set of things, but later titles demand a lot more from the operating system, so those are more difficult to get running. So as much as I'd like it to support *every* iOS game I don't think it will."

> "THE APPROACH I TOOK USES A SYSTEM THAT I'VE DESIGNED THAT DOESN'T ACTUALLY RUN IOS OR EMULATE IT AT ALL. IT BASICALLY JUST RUNS THE GAME"
> HIKARI NO YUME

In contrast to Hikari's focus on emulating Apple mobile games, MetalliC prefers to emulate coin-ops, and interestingly, nostalgia isn't a concern for him. "The arcade games and expensive high-performance computers of the past were very cool and very interesting platforms," MetalliC argues, "while the consoles made prior to the mid-Nineties were cheap and simple mass-consumer devices, so they're not too interesting on the tech side. There is another thing; many people use emulators because of nostalgia. For me, and for many other emulator developers too, it's the other way around. I mostly enjoy using or developing emulators of old computers, consoles or arcade games that I didn't see back in the day, and so didn't have a chance to use or own back then."

As with most emulator developers, MetalliC gives his time to projects for free, and he has an interesting theory for why this isn't an issue for him. "I'm pretty much OK with creating non-profit products," MetalliC considers. "It might be relevant that I'm a product of the Soviet Union, where people were brought up in the spirit of working for the common good. For me personally, it isn't even my main goal to play games via emulation, but I'm glad to see other people enjoying doing that."

One of those people is Carsten, who finds as much joy in developing emulators as MetalliC

» [Xbox] Xbox emulation has been a slow process, but most of its games now run well or perfectly on xemu.

» [Xbox 360] Accurate, comprehensive Xbox 360 emulation is a way off, but Xenia runs around 20% of its library.

» [Vita] The only PlayStation Vita emulator currently plays around 60% of the handheld system's games.

» [GameCube] Aside from supporting most GameCube and Wii titles, Dolphin has features that the consoles didn't.

and is equally committed to videogame preservation. "If I think something is cool then I think it's worth preserving for the next generation, and just to allow more people to enjoy it," Carsten reasons. "So for me the appeal is preservation mainly, and of course the fun of developing emulators, and also playing the games. People can actually play *Tempest 3000* now!"

The attraction of emulator development for Hikari is the golden if potentially brief opportunity it gives to stop digital releases in the mobile space from being forgotten. "I think the appeal for me is that touchHLE is an exciting project," Hikari ponders. "There are generations of mobile games that were playable until a certain point in time, and now they're quickly becoming lost and unplayable. Money was never a motivation. I definitely lost a lot of money through trying to do this project, but I'm not unhappy about that. I would do it again."

» [PlayStation 2] By far the most compatible PS2 emulator, although PCSX2 doesn't yet perfectly emulate the console's library.

» [PlayStation 3] RPCS3 supports two thirds of all PS3 games, but it requires fairly high-spec host hardware.

Another aspect of videogame preservation can also come at a cost, but sourcing hardware is essential to emulating it, so it follows that MetalliC is involved in locating and 'dumping' arcade games into files that can be run on emulators. "I became motivated to preserve Sega arcade games from the 2000s, mainly for Sega NAOMI and similar platforms," MetalliC recollects. "I was working together with the Dumping Union on stuff, so it was a logical move to join them. Finding old games usually involves searching popular auctions worldwide for un-dumped devices and contacting collectors about them. Dumping may be as easy as pulling off ROMs from PCB sockets and reading them using a ROM programmer device, or as hard as months of R&D to develop methods and tool sets to extract data or reverse engineer some protection/encryption."

» [PSP] PPSSPP is compatible with the majority of PSP titles, although a minority crash or won't run.

Looking to the future, Carsten imagines hardware emulators taking over from their software counterparts, as the point is reached where there are no working examples of older coin-ops, computers and consoles. "Some stuff will eventually be lost, I guess," Carsten acknowledges. "You'll be left with a shell, basically, but the internals could be replaced with some sort of hardware emulation. There's the MISTer FPGA project, for example. I think things will continue in that direction, where people try to simulate old hardware one-to-one with new hardware. Everything will be simulated; that's where I think things will end up at some point. With the hardware approach you photograph each chip in great detail, and transition that over to modern hardware to perfectly simulate the original hardware. I guess that's where everything is going. I guess that's the perfect way to preserve things while being totally accurate."

> "I BECAME MOTIVATED TO PRESERVE SEGA ARCADE GAMES FROM THE 2000S. I WAS WORKING WITH THE DUMPING UNION, SO IT WAS A LOGICAL MOVE TO JOIN THEM"
> METALLIC

Of equal concern to failing hardware is the delisting of digitally distributed games, and as Hikari observes, that makes emulating those titles all the more important. "I think emulators are critical to preserving games for future generations," Hikari assesses. "In the case of touchHLE, there are two different points of appeal for me. One is that it makes games a lot more accessible. You don't have to get old hardware, and you don't have to install things on it. But the other problem for early iOS games is that the only way to get them was through the app store, and as that disappears it becomes very difficult to obtain the early games. You can't buy them now."

The problem of digital downloads disappearing after time extends to all discontinued games, but as Hikari explains, preserving them would be a pointless task without also giving future generations the means to enjoy them. "The role of the emulator is not just to make old games accessible; it's also to give people some interest in them," Hikari concludes. "It's to direct effort towards preserving these games so that people can play them in the future, either on an emulator or a real device. So I think the preservation angle is really what excites me the most about emulation, because I want people in the future to find joy in the games that I grew up with, and I hope I've contributed to that." ✱

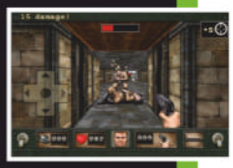
EPIC EMULATION 2008–2009

DELISTED IOS TITLES THAT EMULATION HAS GIVEN A SECOND LIFE

SUPER MONKEY BALL

This iOS entry in Sega's rolling ball, obstacle course-based series distinguishes itself by requiring you to tilt your device to tilt its playfields. This crucial aspect of its appeal is replicated on touchHLE, providing you're running it on an accelerometer-equipped platform.

WOLFENSTEIN RPG



Id's FPS/RPG hybrid has a lot more humour than *Wolfenstein 3D*, including ridiculously stoic Nazi guards and amusingly vocal chickens. As well as turn-based combat and exploration, your progress also depends on moving the story forwards by talking to POWs and German scientists.

DOOM II RPG

A very different beast from its Wolfenstein counterpart, *Doom II RPG* focusses more on combat than communication, although a story unfolds as you access terminals. You find pick-ups, and you can loot defeated foes for stat boosting collectables. You also get XP for beating them.

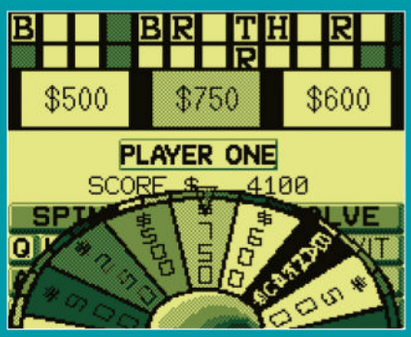
Hardware Heaven

Game.com

» **MANUFACTURER:** Tiger Electronics » **YEAR:** 1997
» **COST:** £74.99 (launch), £45+ (today, boxed), £40+ (today, unboxed)

Back in 1997, it seemed as though a gap had opened up in the handheld market. Sega had discontinued the Game Gear, and Nintendo's Game Boy was eight years old – ancient, in console terms. Enter Tiger Electronics, the tenured purveyor of dedicated handheld LCD games, with a handheld that looked slightly more like a PDA, complete with a touchscreen. The Game.com branding referenced the console's ability to connect to the internet with a dedicated cartridge and modem, a feature unique among handheld consoles of the time.

Tiger's licensing expertise delivered huge names – film licence *Batman & Robin* was a pack-in, while other games included *Duke Nukem 3D*, *Mortal Kombat Trilogy*, *Sonic Jam* and *Resident Evil 2*. These unfortunately tended to be rotten adaptations of their source material, and even if they were better, the system's cheap LCD display made action games very difficult to play due to horrendous motion blur. Those factors, as well as the introduction of the Game Boy Color and *Pokémon*, ensured that the Game.com failed to sell in significant numbers and was ultimately discontinued in 2000. ✱



ESSENTIAL GAME

Wheel Of Fortune

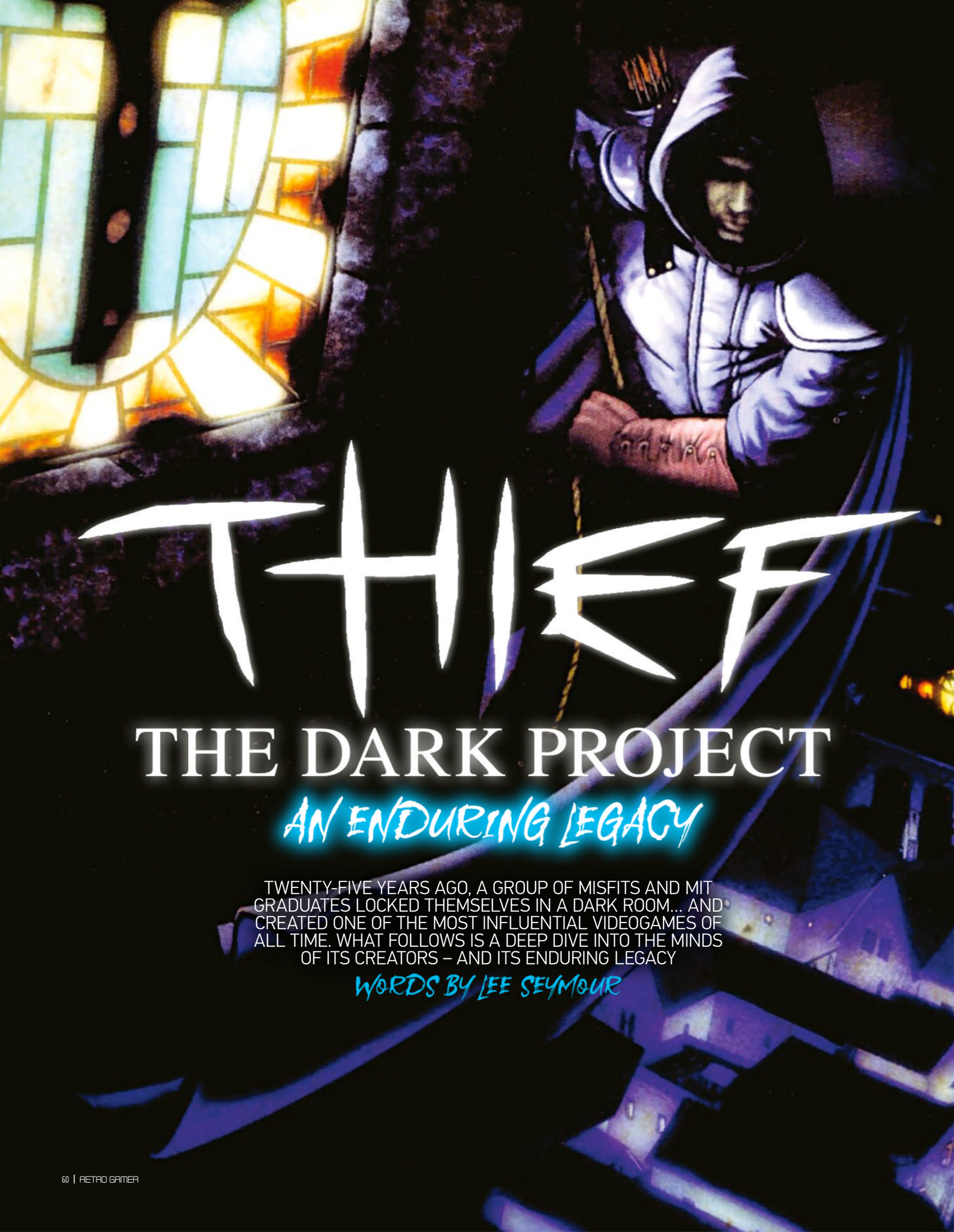
With action games being essentially worthless on the Game.com, this adaptation of the hit game show is an unlikely highlight of the console's line-up. Rather than fighting the weaknesses of the hardware, *Wheel Of Fortune* plays to its strengths – the lack of scrolling graphics allows it to look good on the LCD display, and the touchscreen input is greatly preferable to using button controls for text entry. It's also not a tremendously expensive game, with even brand-new sealed copies going for under £25 at the time of writing.

Game.com fact

■ Delayed shipments of *Batman & Robin* meant that early adopters in the UK had to be given postage paid envelopes to send off for a cartridge. *Wheel Of Fortune* was included by way of apology.

AUDIO: FOUR CHANNEL MONO SOUND (8-BIT PCM CHANNEL, 2X 4-BIT WAVEFORM CHANNELS, NOISE GENERATOR)
STORAGE: 8KB INTERNAL RAM (FOR HIGH SCORES, PHONE BOOK, ETC.)
OPERATING SYSTEM: CUSTOM SYSTEM SOFTWARE (FEATURING CALENDAR, CALCULATOR, SOLITAIRE, ETC.)
GRAPHICS: 200X160 BITMAP GRAPHICS, 4 SHADE GREYSCALE
PROCESSOR: 8-BIT SHARP SM8521 CPU (10 MHZ)
BATTERY: 4XAA, 4-6 HOURS GAMING TIME
RAM: 1KB INTERNAL SRAM, 16KB VRAM
DISPLAY: 3.5 INCH LCD TOUCHSCREEN
NETWORKING: 14.4K DIAL-UP MODEM (VIA OPTIONAL INTERNET CARTRIDGE)

SUPPLIED BY
EVAN AMOS



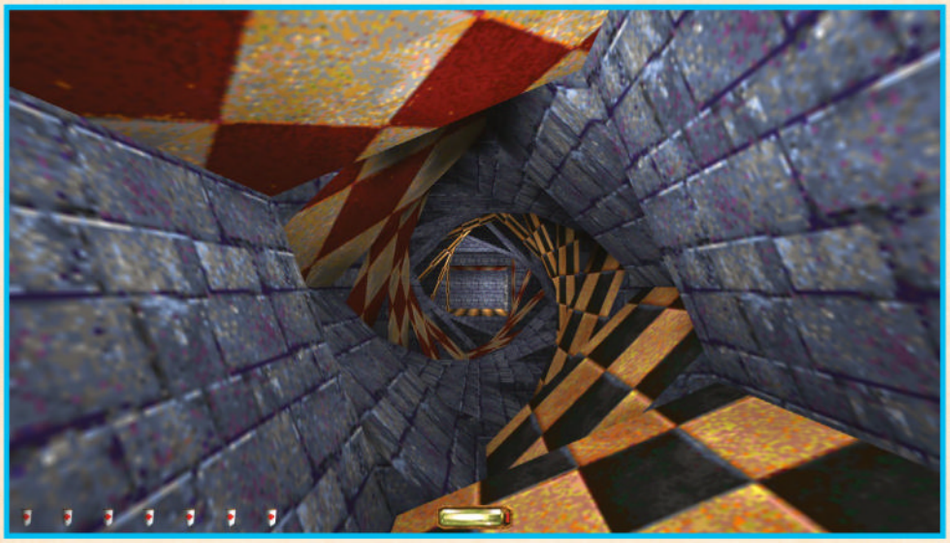
THIEF

THE DARK PROJECT

AN ENDURING LEGACY

TWENTY-FIVE YEARS AGO, A GROUP OF MISFITS AND MIT GRADUATES LOCKED THEMSELVES IN A DARK ROOM... AND CREATED ONE OF THE MOST INFLUENTIAL VIDEOGAMES OF ALL TIME. WHAT FOLLOWS IS A DEEP DIVE INTO THE MINDS OF ITS CREATORS – AND ITS ENDURING LEGACY

WORDS BY LEE SEYMOUR



» [PC] Thanks to strong art direction, *Thief*'s iconic, sometimes surreal maps remain striking in 2024.

One night in 1999, while working late at Looking Glass Studios in Cambridge, level designer Terri Brosius received a call. Not from a colleague… but a colleague's wife. "She called us because her spouse was staying at work so late that she was convinced there was an affair going on," Terri recalls with a laugh. "And we had to talk her down. 'No, there's no affair. Some of us are just… sleeping here. At the office.'"

The anecdote captures an inflection point at the storied studio. It had just shipped *Thief: The Dark Project*, the seminal stealth-'em-up, which received rapturous reviews and sold well enough. But the team knew no rest, and immediately began work on both an enhanced version called *Thief Gold*, and a direct sequel, *The Metal Age*.

"I called it the Dark Pit," jokes Emil Pagliarulo, who joined as a level designer for the sequel, describing an open floor plan with blackout curtains over the windows. "It was the most intense two years of my life. And I was having a fucking blast."

Stephen Russell, who voiced *Thief*'s protagonist Garrett, recalls his first visit to the studio. "It was remarkable. I couldn't even tell what most of the people were doing there, but I could see they were really, really busy. And sleep-deprived."

» [PC] *Thief*'s story had players tangling with demigods and dictators alike – though rarely face to face.

In 1999, Looking Glass was renowned as a hive of creativity, where MIT programmers and cinema junkies from Southie dreamt up paradigm-busting games together. It was also known as a place where the work was so intense that it threatened to derail marriages. But while Terri's anecdote might raise an eyebrow, even more notable is the fondness with which she recalls it. "It was a joy," she says of her time working on *Thief*, late nights and all. "I couldn't get enough of it."

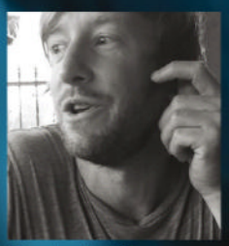
Twenty-five years on, the studio holds an almost mythic place in the history of game development: a singular environment and cohorts driven by passion, not profit margins. And while the studio itself closed in 2000, its output has influenced interactive media ever since. *Thief* is frequently cited as a favourite of other gamemakers, including *Half-Life* architect Marc Laidlaw, and it's no coincidence that Looking Glass alumni went on to lead the teams behind landmark games like *BioShock*, *Deus Ex*, *Guitar Hero* and *Skyrim*.

But what's remarkable is how many of them share Terri's sentiment, speaking wistfully of their time crunching in the Dark Pit. Not to mention how they link that crucible directly to innovation, and creating an entire new genre. "Everyone was very connected to each other," says Eric Brosius, who designed *Thief*'s revolutionary audio engine (and is married to Terri). "That doesn't mean everyone got along. But we had good managers who realised that magic happens if you let things play out."

"Magical is the best word to describe it," agrees Randy Smith, who was a level designer before becoming project director of the third game in the series. "The team somehow shared a vision for something that didn't exist yet."

"We were all constantly in dialogue. That kind of jazz," says artist Daniel Thron, noting that everyone wore multiple hats. (He was also a voice actor, who collaborated heavily with ▶

» [PC] The Looking Glass team wasn't above a few cheeky Easter eggs, like this hidden basketball court.



Randy Smith

» Randy was the level designer on *Thief* and *Thief II*, and project lead on *Deadly Shadows*. Is currently making a new stealth game with fellow *Thief* designer Daniel Thron.

Emil Pagliarulo

» Emil was a level designer on *Thief II* and has spent the last 20 years at Bethesda, and is the studio's design director.

Stephen Russell

» Stephen was the voice of Garrett in *Thief*, *Thief II* and *Deadly Shadows*. He has voiced characters in many iconic games since *Thief*, including *Fallout 3* and *4* and *Dishonored*.

Eric Brosius

» Eric was a sound designer for *Thief*, *Thief II* and *Deadly Shadows*. He moved from Looking Glass to Harmonix, along with original *Thief* director Greg LoPiccolo.

Terri Brosius

» Terri was a level designer, voice actor and writer on *Thief Gold*, *Thief II* and *Deadly Shadows*. She is currently working on *Thief* successor *Gloomwood*, and is also known as the iconic voice of SHODAN in *System Shock*.

Daniel Thron

» Daniel was a designer, voice actor and artist on *Thief*, *Thief II* and *Deadly Shadows*. A VFX artist with credits on the *Avengers* films, he is now making a stealth game with *Thief* alum Randy Smith.

» [PC] A posh bank, after hours. The design ethos foregrounded maps that felt like real places to infiltrate.

» [PC] Much of *Thief*'s story was left for players to discover at their own pace, like the secrets in this abandoned library.

» [PC] "Immersion" doesn't preclude the supernatural. Zombies – and worse – haunt *Thief*'s darkest corners.

▶Terri, who was also a writer, and so on.) "We would go to the office at two in the morning. Everyone has that story. But we'd go because we couldn't get it out of our heads. It's not a product to us, it's a work of art that we are creating." Despite the Dark Pit, Emil concurs. "It was a bastion of creativity, where creatives had the power to make the vision that they had in their head. I was obsessed. We all were."

And – of course – it couldn't last. While Looking Glass was making a name for itself as a creative powerhouse, it was also, as Eric Brosius put it, "Famous for being behind schedule and over budget." Despite shipping an even more lauded *Thief* sequel, the studio shuttered in 2000. It turns out profit margins couldn't be sidelined forever.

OK. So, Looking Glass was a beautiful, bubbling cauldron of a studio, filled with creative geniuses but overseen in a way that would make most managers shriek. It didn't survive… yet here you are, reading a feature about its legacy 25 years later. What, exactly, was so special about its flagship pilfering simulator?

Briefly: in 1998, the gaming landscape had no real stealth titles amid *Mario*-clones and *Doom*-clones. Then two of them, each with wildly different takes on the concept, launched almost simultaneously: *Thief* and *Metal Gear Solid*. Konami's game was an operatic, third-person espionage game studded with military jargon and bombastic boss fights. Its stealth systems were clear but cartoonish, with exclamation marks appearing above enemies when alerted, and felt as often like a movie as it did a game.

Thief, by contrast, was almost haptic in its immersion. It was in first-person, with hypnotic audio and diegetic feedback. Each heist was designed to feel like a real place, and players were encouraged to drink it in, manipulating the environment as they explored. It was deliberate, mysterious, empowering – and wholly unlike anything on the market.

"We were very serious about presenting an environment that you could believe in," Randy says. "We think about the stealth now, but I'd argue it was actually the immersion that made it successful. Very few games – to this day – make you feel as much like you're in a space as *Thief* does."

"Looking Glass had such a long-term, profound effect on people because of the deep sense of trust we had in the player," Daniel adds. "There isn't a single solution in *Thief*. It's up to you to figure out how to steal the thing. It's letting you tell that story through gameplay. And that sense of ownership makes it unique. It becomes yours."

So what happened next? The turn of the millennium saw an explosion of these games, collectively known as immersive sims: *Thief*, *Deus Ex*, *System Shock* and their sequels all emerged from the same core talent pool, and seemed poised to reinvent gaming as we knew it. But in the years immediately following, their influence was subtle. One might even say (ahem) stealthy. This is partly due to a narrower appeal; immersive sims are widely beloved by designers but often overlooked by more casual gamers. "Sitting still is not one of humanity's

THIEF'S LEGACY

FIVE WAYS THIEF CHANGED THE GAME

AVOID THE LIGHT

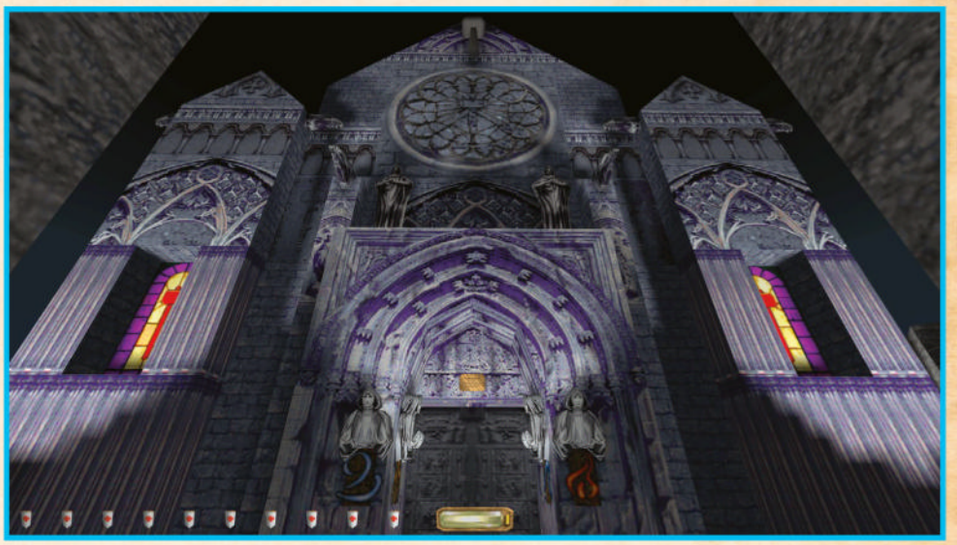
■ *Thief*'s stealth is deep but clear – a HUD indicator displays exactly how visible you are to enemies. This mechanic has been widely adopted, notably by *The Elder Scrolls* series and its Sneak skill, which features an 'opening eye' detection meter.

WATCH YOUR STEP

■ "It was ray tracing, but for audio," says executive producer Jonas Eneroth of *Thief*'s revolutionary sound design. Realistic propagation allowed players to track enemies by the sound of their voices – and footsteps. Rarely equaled since, it remains top-of-its-class even in 2024.

IMMERSE YOURSELF

■ Each heist in *Thief* is designed to feel like a real place into which the player intrudes, not an expectant shooting gallery. Revolutionary in 1998, this verisimilitude is now commonplace. Think *BioShock*'s lived-in districts, or *Hitman*'s levels that even make use of mundane toilets.



» [PC] You can't hear pictures, but if you could, this one would make your skin crawl. Promise.

strong points," Emil sighs. "It's a tougher sell in a mass market."

So even as *Thief*'s designers moved to new studios, its influence between 2003 and 2012 was more piecemeal. It is there: in the environmental richness of *BioShock*'s Rapture; in *Hitman*'s methodical infiltration setups; in the stealth systems of broader games, like Bethesda's *Elder Scrolls*. "*Thief* led directly to better stealth in our games," Emil says of Bethesda, where he is now the design director. "But here, we always skew a little easier than harder, a little more accessible."

For the most part, the Noughties focussed on expanding that accessibility: *Gears Of War*, *Halo*, *Call Of Duty*. Bombastic popcorn games that served up a player fantasy more suited to loud dorm rooms than solo exploration. Even stealthy peers like *Splinter Cell* transformed, fetishising lethal action over considered espionage.

Then, in 2012, *Dishonored* released: a stealthy, first-person sim that allowed tremendous degrees of player freedom in its moody, richly detailed environments. And it was a hit. (Not coincidentally, one of its directors was Harvey Smith, lead designer of *Deus Ex* and torchbearer of the generation that had come through the Looking Glass.)

And in 2015, *Metal Gear Solid* performed a gargantuan buttonhook. Eschewing the cinematic bloat of its predecessors, *The Phantom Pain* foregrounded a dynamic, open map dotted with opportunities for player expression. One could scout locations,

BUILD YOUR KIT

■ In 1998 first-person games, player 'tools' were usually guns. *Thief* provided a toolkit that could manipulate your environment. Extinguish torches with water arrows, or distract guards with noisy objects. *The Phantom Pain* and *Breath Of The Wild* are two modern torchbearers.

KNOCK 'EM OUT

■ In *Thief*, murder is the mark of an amateur, and players are encouraged to 'ghost' missions without being detected. This ethos influenced a whole lineage of immersive sims, all of which allow player expression through degrees of pacifism – or violence.

THE BLACK PARADE

A LANDMARK COLLABORATION OF FANS AND DEVELOPERS

■ One of *Thief*'s most enduring legacies is its fan community, which is still thriving today. For 25 years, sneaky modders have crafted custom heists for the original games, from funky experiments to full pro-tier campaigns. Indeed, many of these authors have gone on to become professional devs, making AAA immersive sims at studios like Arkane and Ion Storm. And to mark the 25th anniversary of *Thief*'s release this winter, a supergroup of pros and amateurs joined forces to craft *The Black Parade*, a free, ten-mission prequel to *The Dark Project*, built in the original engine. The response from players was huge – it won ModDB's Mod Of The Year – and the work is truly stunning. *The Black Parade*'s heists are gargantuan maps, crammed with all the sneaky, spooky goodness you could hope to find in a *Thief* game in 2024.

Making it all the more special was the full-circle involvement of Daniel Thron, one of *Thief*'s original designers, who recorded voice over for several characters. "It's incredible," Thron says of the project. "An absolutely insane piece of work. It's 100% the old vibe – and its own beast." For those interested, you can find *The Black Parade*, and hundreds of other custom heists, at ttlg.com

STEALTHY SEQUELS

A CLOSER LOOK AT THE DARK PROJECT'S PROGENY

THIEF II: THE METAL AGE (2000)

Bigger, bolder, stealthier… better? Freed from the burden of inventing a brand-new genre, the devs could hone its strengths for the sequel, with more heists and less tomb-raiding. Overall, the missions are larger, with more secrets – but the vibes are palpably different. Superficially similar, the first two *Thief* games are distinctly their own beasts.

THIEF: DEADLY SHADOWS (2004)

After Looking Glass closed, core team members moved to Ion Storm Austin to finish the third game. Production was hampered by technical issues, including a map-destroying renderer that tanked months of work. But the storytelling remains terrific, and it features several iconic heists – including the Shalebridge Cradle, widely regarded as one of the most frightening levels in all gaming.

THIEF (2014)

This iffy reboot is a case study in the challenges of replicating Looking Glass' magic at a modern AAA studio. Gone are series hallmarks like open environments and immersive storytelling, replaced by claustrophobic maps and QuickTime Events. The stealth is murky, the story is schizophrenic and the scars of cut content are palpable throughout. An ignoble end to the series – for now.

» [PC] Eavesdropping on *Thief*'s bumbling guards provides both a tactical advantage… and levity to break up tension.

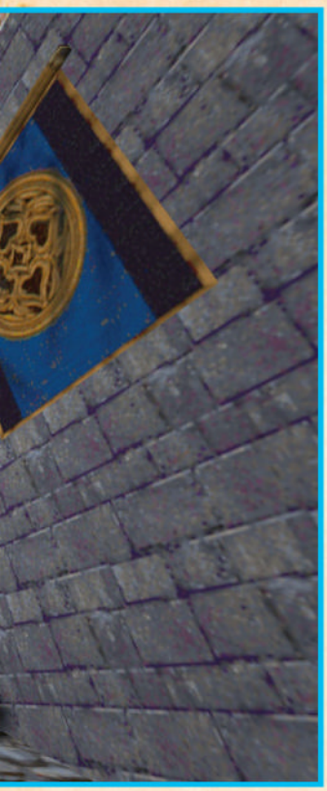
» [PC] Nightdive's remake of *System Shock* adheres fantastically (and fanatically) to the precepts Looking Glass laid out in 1994.

» [PC] *Dishonored* iterated *Thief*'s stealth formula with supernatural powers, faster movement, and stylish violence.

» [PC] The iconic cardboard box is but one of dozens of player tools in the most immersive *Metal Gear Solid* entry.

» [PC] *Prey* is an astonishing immersive sim, featuring a single contiguous map that responds constantly to players and their choices.

» [PC] *Deus Ex: Mankind Divided* left its story unfinished, but provided abundant depth and freedom for player expression.



» [PC] Swordplay was clunky by design – a last resort for heists gone wrong. You're a thief, not a thug.

infiltrate compounds, carry out missions with custom toolkits, improvise on the fly and escape unscathed. Indeed, if you replace 'missions' in that sentence with 'heists' you might as well be describing *Thief* – just with a few more silenced firearms. It also became the best-selling game in the series, with nearly ten million units moved.

2016 followed as a banner year. First, the *Hitman* series rebooted itself, giving players an embarrassment of stealthy tools and the freedom to mash them up in surprising ways, across maps that felt like real places into which one discreetly intruded. It was a huge financial success.

Then came *Dishonored 2*, which doubled up on player powers, including a jaw-dropping time-travel mechanic that fit perfectly in the larger toolkit – and cast Stephen Russell himself as the protagonist. And *Deus Ex: Mankind Divided* inched closer to the immersive-sim ideal as described by Looking Glass alum Warren Spector: a single city block in which the player could enter any door, and find a responsive world behind each decision. Lastly, the 2017 release *Prey*, also made by the *Dishonored* team at Arkane Studios, became a spiritual successor to *System Shock*. It even named its in-game sci-fi tech 'Looking Glass'.

This all amounted to a remarkable volley of high-profile AAA games that didn't just feature token stealth sections, but were firmly anchored in the DNA of a long-defunct studio in Cambridge, Massachusetts. True, not all of them were hits. (*Prey* in particular remains criminally underplayed.) But through them one can trace a resurgence of the Looking Glass ethos: create a world that feels real, immerse the player in it, and let them find their own way through.

So how does *Thief* fit into 2024? The series itself is moribund; after a disastrous 2014 reboot by Eidos Montreal, it sat untouched until Embracer Group hoovered it up in its quest to purchase all of Earth's IP. As of this writing, Embracer is shedding assets like snakeskin, so who knows how or if *Thief* will emerge again.

Stealth overall has become more a AAA mechanic than a mainstream genre, with mixed results. Some titles fold it organically into their broader canvases, like *The Elder Scrolls*. Others bolt clunky sneaking sequences onto their action fantasies, like Sony's *Spider-Man*.

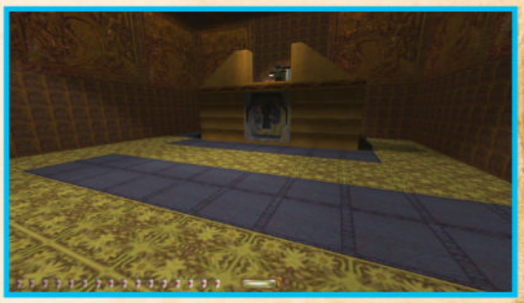
One rather sees smaller studios taking up the immersive stealth mantle. Which, given its origins, feels fitting. Thomas Grip, founder of Frictional games, cites *Thief* as a prime inspiration for the studio's wildly successful *Amnesia* series. And Nightdive Studios came full circle last year, releasing its fantastic, faithful remake of Looking Glass' own *System Shock*. And Randy and Daniel themselves – who are now collaborating on a new stealth game – point to the indie scene as an analogue to the Looking Glass cauldron.

"I think it's coming back strong," Daniel says. "You can make a living, making a game with a team of five people. And the less people you have, the less you have to worry about reporting to somebody else. It gives you more freedom."

"You can make a game with Unreal or Unity and have it done in six months," Randy says bluntly. "And if it's really good, like *Vampire Survivors*, you are going to be a hit. And that wasn't available to folks in the Nineties."

One such project is dovetailing both figuratively and literally with the Looking Glass lineage. *Gloomwood*, led by Dillon Rogers at New Blood, is a spooky stealth-'em-up whose own website is, ahem, thiefwithguns.com and it features none other than Terri Brosius as the voice of its prime antagonist.

"New Blood is sort of its own weird chaotic anomaly," Dillon says. "We're a bunch of people who just want to make games, came together as a collective… and now we have to figure out how to manage. It's artist-led, and it can get chaotic, but we're also malleable. And we'll just keep doing this until it stops working."



» [PC] Among *Thief*'s revolutionary audio features: different surfaces were "louder" than others, turning ordinary rooms into environmental puzzles.

Sound familiar? As for *Thief* itself, while many of the original devs are excited about their new projects, the notion of a revisit still holds a special appeal. When asked if he would step back into the recording booth and play Garrett for another instalment, Stephen Russell answered in character and without hesitation, "In a heartbeat."

(And, of course, there's a dispiriting coda that leaked just before this piece's deadline: Arkane Austin, the studio behind *Prey* and *Dishonored*, was shut down by its new owner Microsoft. Not, evidently, because its immersive sims sold poorly, but because it was pressured to make the opposite type of game: a co-op-battle-royale-hero-shooter hybrid called *Redfall*. It's an awful echo of history, but the lesson here shouldn't be that Looking Glass' legacy is unpalatable. It's that developers should be allowed to play to their strengths. Only by giving the best gaming minds creative freedom can we hope to see the same kind of envelope-pushing that defined the turn of the millennium.)

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Daytona USA

"I WANNA FLY SKY HIGH, LET'S GO TOGETHER"

» SATURN » 1995 » SEGA AM2

It's easy to feel like there are no bargains left in retro gaming, but every so often I find something that gives me hope. My local CeX was the last place I expected that to happen, given that a £525 Mega-CD copy of *Snatcher* spent the best part of a year acquiring sun fade in its front window, but I recently happened across an official Arcade Racer wheel for the Saturn in there. I decided to pick it up, and as the cashier went to hand it over, she said, "Oh hang on, we've got the box for it here, do you want that?" I definitely did, and it turned out to also have all the bags and instructions. Not bad for £10 all in, I'd say.

I decided to test the wheel with *Daytona USA*, which is a game that has a poorer reputation than it deserves. There's no denying the conversion suffers from a low framerate, major pop-in and big borders, and less obviously the PAL version was somewhat botched in a well-meaning attempt at optimisation. However, many Saturn fans will tell you that the classic *Daytona* gameplay shines through regardless, and that's true no matter how you play it.

Even so, adding the wheel really does elevate the experience. Within minutes, the graphical blemishes faded into insignificance – all I cared about was teasing out the right way to approach every turn, from the delicate touch needed for the long curve in Dinosaur Canyon to the dramatic drifts of Seaside Street Galaxy. Fighting the Hornet's inclination to spin out of a slide is always fun, but it just feels so much closer to the arcade version when you've got the wheel. *Daytona* may have come home in arcade perfect form on the Xbox 360 and PS3, but I remain amazed by the way AM2 managed to preserve the essence of the original game despite the Saturn's technical challenges. ✱

ULTIMATE GUIDE

WarioWare, Inc.

MINIGAME MANIA

IN 2002, A SMALL TEAM OF NINTENDO VETERANS WORKED IN SECRET TO CREATE WHAT WOULD BECOME ONE OF THE COMPANY'S WEIRDEST VIDEOGAMES. MORE THAN TWO DECADES LATER, WARIOWARE INC: MINIGAME MANIA REMAINS AN ENDEARING AND COMPELLING EXPERIMENT

WORDS BY JAMES TOCCHIO

It has been said that many of the world's great inventions were made by accident. In 1895, Wilhelm Röntgen unintentionally discovered X-rays when a shielded vacuum tube cast an image of his hand-bones onto a nearby fluorescent screen. In 1878, the artificial sweetener saccharin was patented when Constantin Fahlberg forgot to wash his hands after a day in the lab and noticed that his sandwich tasted unusually sweet. Subsequent chemical taste-testing resulted in Sweet'n Low, while Play-Doh was invented as a clay sponge to clean coal dust off wallpaper.

In August of the year 2000, the staff of Nintendo R&D1 had recently completed work on *Mario Artist: Polygon Studio*, a game in the *Mario Paint* series released exclusively in Japan for the Nintendo 64DD. In *Polygon Studio*, players were able to construct, render, texture and paint 3D polygonal models which could then be used to navigate a 3D game world.

Alongside this main game, *Polygon Studio* also included a subgame called *Sound Bomber*, in which the player's constructed models appear in rapid-fire sequences of short and silly microgames.

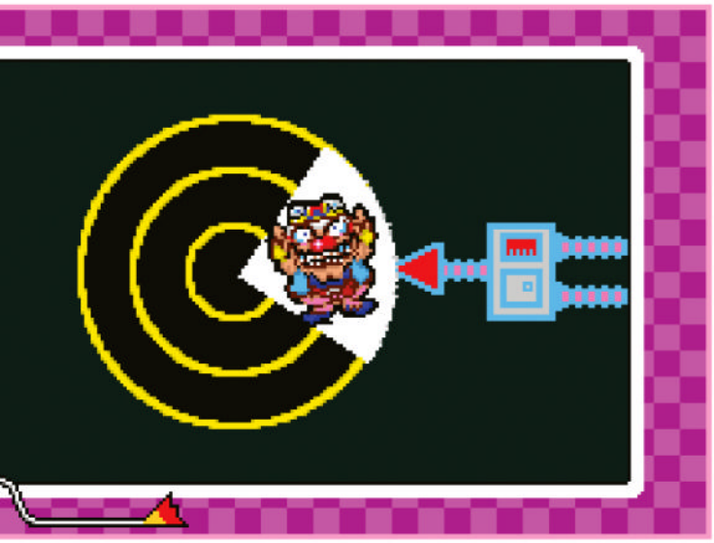
Sound Bomber was an unexpected hit, a game mode which the team and their peers enjoyed even after work on *Polygon Studio* had wrapped. The fast-paced, bite-sized, deceptively simple games made for quick, addictive breaks during workdays. This was the accidental X-ray moment for a small group of Nintendo veterans.

Yoshio Sakamoto, Goro Abe, Ko Takeuchi and Ryuichi Nakada imagined a game based on the core idea of *Sound Bomber*, an entire game made up of bizarre microgames which could each be played in mere moments, all loosely tied together with an absurd storyline fronted by Nintendo's baddest bad apple, Wario. Thus, the kernel of *WarioWare* had formed. But *WarioWare*'s success was not predestined. In fact, the small team of developers were so sure that they'd fail to gain managerial approval that they developed the game in secret.

Their fears were ultimately unwarranted. Development of *WarioWare Inc: Minigame Mania* (or *Mega Microgame$!* as it's known elsewhere) was approved, and soon it seemed that everyone in the building was submitting their own ideas for microgames. When *WarioWare* released in Japan in March 2003 ▶

> "WARIOWARE'S SMALL TEAM OF DEVELOPERS WERE SO SURE THAT THEY'D FAIL TO GAIN MANAGERIAL APPROVAL THAT THEY DEVELOPED THE GAME IN SECRET"

» [Game Boy Advance] In Raging Rhino, something about this bull looks weird… oh well.

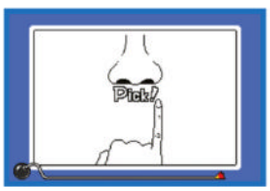


» [Game Boy Advance] Wario Whirled is one of the games ported from *Polygon Studio*.

» [Game Boy Advance] In Hot Dog Hog, Wario must munch down his lunch in just two bites.

Mega Microgame$!

TEN OF OUR FAVOURITE MICROGAMES

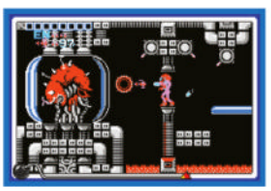


Gold Digger

We recently chatted with Gail Tilden, the editor of *Nintendo Power* for over a decade, and when we mentioned *WarioWare* she reflected, "Oh, yes, the one with the nose-picking." Seems that everyone remembers Gold Digger. Pick a winner!

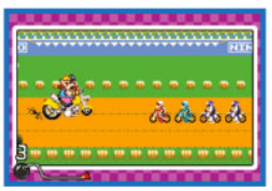
F-Zero

In the *F-Zero* microgame, you control Captain Falcon's Blue Falcon racer as it screams along the track of Mute City. Avoid the obstacles and enjoy the nostalgic rush provided by four seconds of Mute City's iconic theme song.



Metroid

This microgame from 9-Volt's collection puts you in the boots of *Metroid*'s Samus during the final confrontation with Mother Brain in the classic NES game. Simply mash the A button over and over to destroy the foul pickled menace.



Unexcite Bike

Another callback to a NES game of yore, Unexcite Bike features Wario racing along the classic *Excite Bike* track. Manoeuvre around holes in the ground and avoid the pack of *Excite Bike* sprites riding in the opposite direction.

Float Your Boat

An inflatable banana floats peacefully in a cerulean sea, until Wario catapults into frame wearing a striped one-piece and a yellow swim cap! The player must press the A button to drop Wario onto the float, safe and dry.

Mashin' Martians

A perfect example of *WarioWare*'s rich and varied style, Mashin' Martians is a whack-a-mole-like microgame in which you must smash aliens back into their burrows. The claymation characters are reminiscent of Nineties games like *ClayFighters* and *Claymates*.

Nighttime Allergies

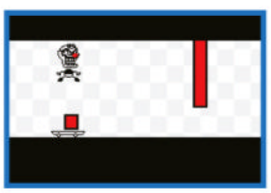
Another microgame which showcases the variety of styles in *WarioWare*, Nighttime Allergies depicts a beautifully hand-drawn character being melodramatically tearful against an oceanside scene at night. Mash the A button to sniff a nasal drip back into the crier's nostril.

Mario Clash

In 1995, we stared endlessly through the lenses of our brand-new Virtual Boy. We still love the monochromatic red games of that admittedly flawed system. *WarioWare*'s Mario Clash microgame brings us back to those glorious days (for three seconds, anyway).

What's the Toadal?

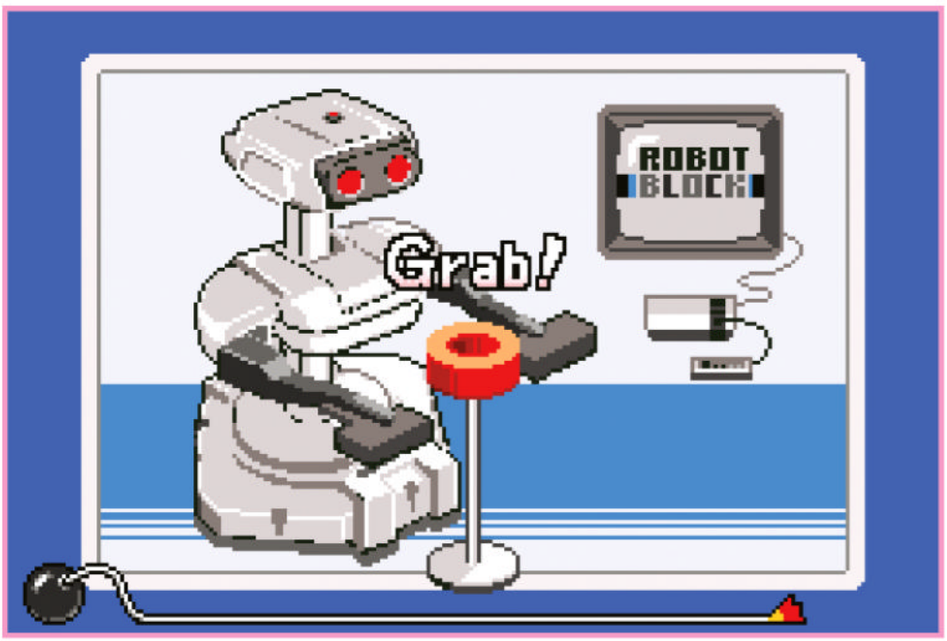
There are dozens of microgames which feature animals. Dogs shake paws and catch discs, penguins waddle, worms wriggle, flying squirrels squirrely fly… the list goes on. In What's the Toadal? you have a deceptively simple task – just count the frogs.



Wario's Adventure

The final game in *WarioWare* is the most challenging of all. It's an extended boss fight involving a stick-figure Wario, falling stalactites, skateboards, boomerangs, boulders, even a jetpack! Wario's Adventure wraps things up with a high-speed adrenaline rush and killer music.

» [Game Boy Advance] Cheeky Monkey features a hand-crafted art style and a very moody monkey.



» [Game Boy Advance] Stackup features a cameo from the NES-era peripheral Rob The Robot.

alongside the new Game Boy Advance SP, it earned rave reviews and sold 700,000 copies. It went on to sell over 1.1 million units worldwide and spawned 11 sequels.

The plot of *WarioWare* is slightly meta and totally silly. While lounging around on the couch, Wario is distracted from his nose-picking by a financial news report about a new (and fictional) Game Boy Advance game called *Pyoro*, which has shattered sales records and netted its creators a lot of money. Wario, ever watchful for seemingly easy opportunities for fiscal advancement, sees dollar signs. He dreams up an idea: to enlist the help of the many colourful weirdos who live in his city and make a videogame of his own. And so, *WarioWare* begins.

There are nine stages, each fronted by Wario or one of the game's other ridiculous characters, and each stage contains several microgames which are presented in rapid succession, and which must be completed within a demanding time limit (usually in four musical beats). If you succeed at a given microgame, the next immediately follows, and the pace increases until you reach a boss stage or until the duration of each microgame is so short that the pressure causes a loss. If you fail to complete a microgame, you lose one of your four lives, and when you lose all four, it's game over.

The rapid and frantic presentation of microgames poses a natural challenge both to the player and the game's programmers. When Nintendo staff were dreaming up microgames, the objective of each game had to be extremely simple and easily definable, since the player has about one second to parse what's happening on the screen and about three seconds to complete the objective. Thus, at the start of each microgame, a prompt is splashed across the screen.

Pick! appears on the screen, and you see a pinky finger scrolling left and right under two

Crazy Sequels

WarioWare: Twisted!

Game Boy Advance, 2004

WarioWare: Twisted! is the only Game Boy Advance game to offer motion controls and built-in vibration function. A gyroscope in the cartridge allows you to tilt and twist through hundreds of microgames. IGN named it the GBA's best game.

WarioWare: Touched!

Nintendo DS, 2004

The second first-party game that Nintendo released for the Nintendo DS, *WarioWare: Touched!* utilises the system's touch screen and microphone as primary control methods. A shorter game than those which came before, it successfully retains its predecessors' chaotic appeal.

WarioWare: Smooth Moves

Wii, 2007

The only *WarioWare* game released on the Wii, *Smooth Moves* features microgames which require the player to manipulate the action with the Wii Remote. There is a greater focus on 3D graphics and physical gameplay compared with the earlier games.

» If you don't want to own a physical copy, Nintendo's game is available on its Switch Online service.

"IT ALL HAPPENS IN SECONDS, AND THE BETTER YOU PLAY, THE MORE FRANTIC AND FUN IT BECOMES"

» [Game Boy Advance] Inspect the Game Boy Advance as quick as you can, and then find its match.

A SAMPLING OF WARIOWARE'S WILDEST SEQUELS

Game & Wario

Wii U, 2013

Designed to showcase Nintendo's Wii U console and gamepad, *Game & Wario* deviates from the *WarioWare* formula as the games are longer minigames as opposed to rapid-fire microgames. Reviews were harsh, and many fans consider this the least successful *WarioWare*.

WarioWare: Move It!

Switch, 2023

Released for the Switch last year, *WarioWare: Move It!* is a direct sequel to *Smooth Moves*. Like that earlier game, *Move It!* features motion-based microgames. It's less frantic and funny than earlier entries but *Move It!* remains a fairly fun party game.

Colourful characters

THE ROAD TO WARIO IS PAVED WITH WEIRDOS

JIMMY T

GENRE: ..... SPORTS

Each of the eight characters in *WarioWare* offer 24 microgames. The first character, Jimmy, is a disco-dancing dude with a fancy flip-phone whose games involve sports such as unicycle balancing, karate chopping and extreme trampoline…ing.

DR CRYGOR

GENRE: ..... REALITY

When you first see Dr Crygor, he's having something of a potty emergency. He rushes to the bathroom and his super silly games begin – they include photorealistic bananas, rhinoceros bullfights, smashing cymbals, dog's paws and claymation alien whack-a-mole.

9-VOLT

GENRE: ..... NINTENDO

9-Volt's microgames are the star of the show. He's obsessed with collecting Nintendo games and consoles, and his microgames throw back to classic Nintendo franchises like *Metroid, Duck Hunt*, Ultra Hand, *Mario Clash* (Virtual Boy), *F-Zero* and more.

ORBULON

GENRE: ..... IQ

Orbulon's microgames are designed to test intelligence. They include visual puzzles, wacky matching games, chaotic counting tasks and quick logic puzzles. Since Orbulon's games tend to be more challenging than most others, you get twice as long to solve them!

DRIBBLE AND SPITZ

GENRE: ..... SCI FI

Dribble and Spitz are a dog and cat duo who drive a taxi, and their games are inspired by sci-fi tropes. Catching aliens, escaping aliens, shooting aliens, etc. Interestingly, there are a number of games about scooters and ninjas, too.

KAT AND ANNA

GENRE: ..... NATURE

Kat and Anna are ninja twin sisters whose microgames share a nature theme. Photograph a flying squirrel, feed a snail, launch a mouse from a simple fulcrum so that they may catch and eat a coconut… you know, nature!

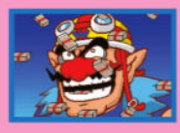
MONA

GENRE: ..... STRANGE

Mona's games are supposed to be strange. An anime girl cries at a lighthouse (you mash the A button to sniff her snots back into her nose), there's a ghost-hunting game and another in which you twirl spaghetti on a fork.

WARIO

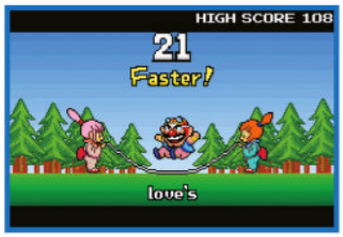
GENRE: ..... ANYTHING GOES!



True to self-absorbed form, Wario's microgames all feature Wario as the main character. He's a pilot, a boxer, a racecar driver, even a dung beetle. You dress him, you feed him, you hide his big belly. Here, Wario's the star!

Micro Microgame$!

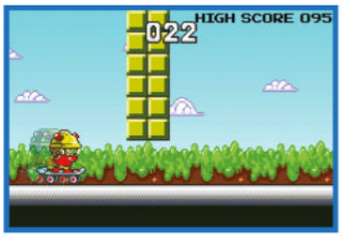
BUT WAIT, THERE'S MORE! BONUS GAMES, THAT IS



Jump Forever!

How to unlock: Beat Jimmy's stage

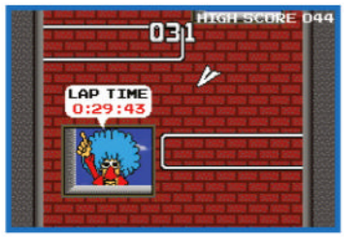
There are 12 unlockable bonus games in *WarioWare*. The first is Jump Forever, in which Wario must jump rope, apparently forever! Reaching 100 jumps unlocks optional player's choice background music.



Skating Board

How to unlock: Beat Jimmy's Remix No 1

In Skating Board, the player controls 9-Volt as he rides his skateboard and avoids obstacles and birds by jumping and ducking. Timing is everything in this simple (yet difficult) game.



Paper Plane

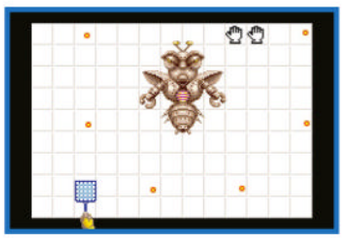
How to unlock: Beat Jimmy's Remix No 2

This is an expanded version of one of *WarioWare*'s standard microgames. The player must carefully guide a gliding paper plane downward through a tower without touching any obstacles.

Dr Wario

How to unlock: Score 20+ points in Jimmy's stage

Dr Wario is a Wario-ized port of the NES game *Dr Mario*. The player must eradicate viruses by placing pills of the same colour against them in a column or row.



Fly Swatter

How to unlock: Score 25+ points in Jimmy's Remix No 1

An altered port of Gnat Attack, a minigame from the SNES game *Mario Paint*. The player must swat flies, bees, bombs and, eventually, King Watinga, a giant robotic fly.

Sheriff

How to unlock: Score 25+ points in Jimmy's Remix No 2

In Sheriff, an altered port of the ancient arcade game *Sheriff*, Wario must shoot all the bandits in each level to rescue a lady named Betty. Frank Spencer would be very jealous.

Pyoro

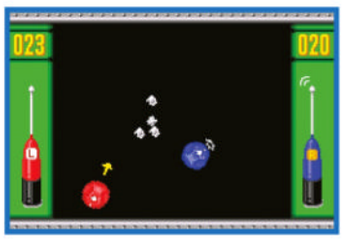
How to unlock: Unlock all games in the grid

In *WarioWare* lore, *Pyoro* is the game which made so much money that it inspired Wario to create his own game. You must frantically catch falling beans with Pyoro's stretchy tongue!

Pyoro 2

How to unlock: Earn a flower in all games in the grid

The gameplay is similar to Pyoro, except in Pyoro 2 you spit seeds to destroy the falling veggies. Enjoy the background art with this one… it gets really wild.



VS Chiritorie

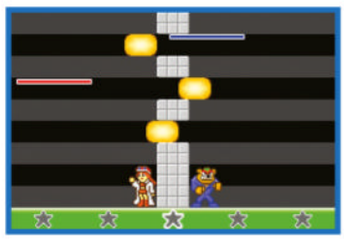
How to unlock: Beat 3 stages

WarioWare also includes two-player bonus games, including this one. Chiritorie is based on a Nintendo game from 1979 in which players use vacuum cleaners to pick up trash.

VS Chicken Race

How to unlock: Beat 4 stages

Two players charge up a power meter by holding L or R and release it to propel their skateboarding character closest to the cliff's edge (without falling off, of course).



VS Dong Dong

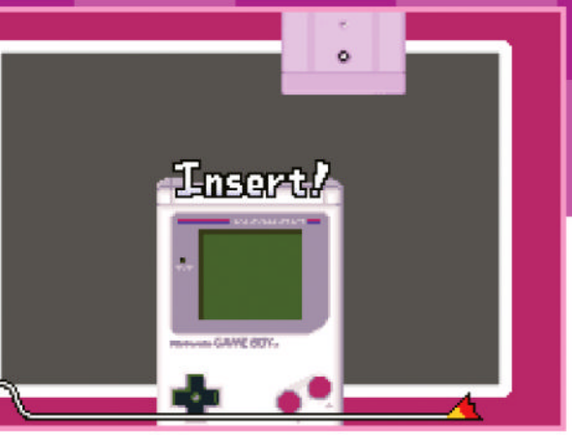
How to unlock: Beat 7 stages

Horizontal bars travel up and down on each side of a central vertical wall; these are used to push blocks out to fall and squash your opponent. The first squasher wins the game!

VS Hurdle

How to unlock: Beat 8 Stages

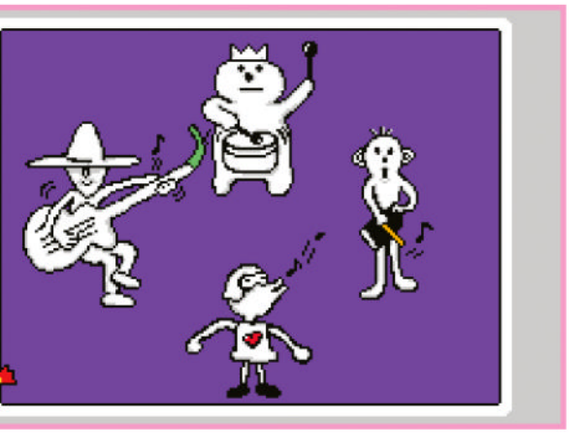
Orbulon and Dr Crygor race the hurdles! Players use L and R to jump hurdles and race through muddy puddles. The first to cross the line wins! Sounds pretty simple, right?



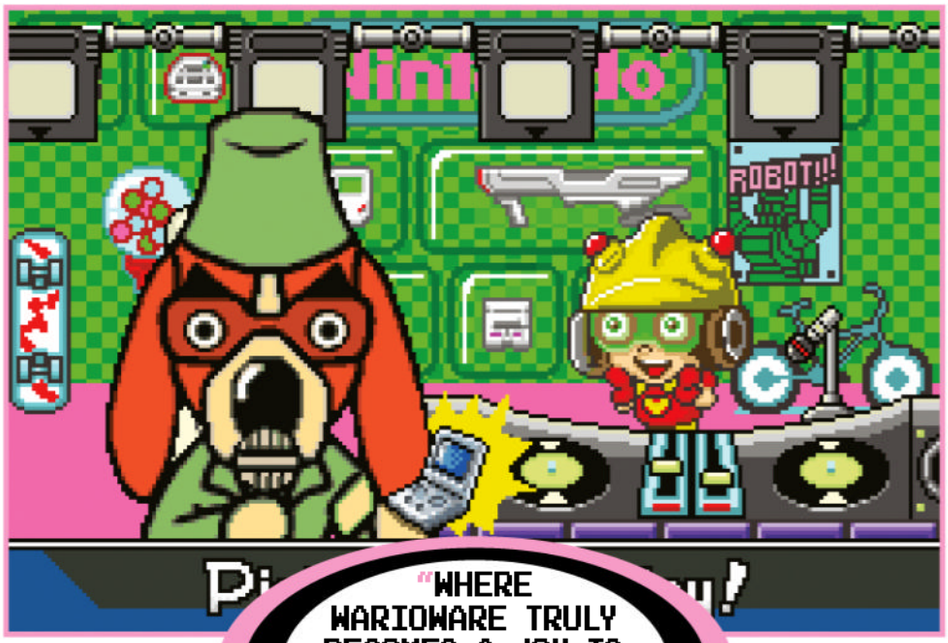
» [Game Boy Advance] Press A to insert the cart into ol' faithful, the DMG-01 Game Boy!

» [Game Boy Advance] Another game which pays tribute to Nintendo's past, and Gunpei Yokoi's Ultra Hand.

» [Game Boy Advance] In Classic Clash, a Kaiju-looking Mario and Bowser square off for battle.



» [Game Boy Advance] Garag Rock is a Simon Says-style game.



"WHERE WARIOWARE TRULY BECOMES A JOY IS WHEN YOU REACH A ZEN-LIKE FLOW STATE"

flaring nostrils. Pressing the A button makes the finger jab upward, and we've got one try to get the finger in the nose.

Enter! appears on the screen, and you see an 8-bit Link from the NES *The Legend Of Zelda* standing some yards away from an open cavern door. You've got four musical beats to manoeuvre your favourite Hylian into the cave.

Shine! appears on the screen, and you see a child with a flashlight standing in a decrepit ruin. Pressing left or right on the directional pad tilts his flashlight so that you may scare the ghost away with the light.

And it goes on and on, through nine stages of over 200 microgames. One moment you're playing as a red-scale Mario in an homage to Virtual Boy's *Mario Clash*, a moment later you're smashing claymation whack-a-mole Martians with a giant mallet, and just a moment after that you're spraying a tiny rotating flower with the spraying arm of a bidet (don't ask). It all happens in seconds, and the better you play, the more frantic and fun it becomes.

Chop! And laugh at the samurai's silly face. Avoid! And feel sweet nostalgia for *F-Zero*'s Mute City. Fire! And remember that *Metroid* was your brother's favourite game. It's the speed and variety of these experiences that makes *WarioWare* so special, but it's not the only thing.

Discerning the goal at the start of each bizarre microgame is just the start. Once you know what you're supposed to do, you must do it. This is where the fun factor could have easily fallen apart in *WarioWare*'s development. However, the team understood that the game required simple controls.

The only commands that may be input are up, down, left, or right on the directional pad, and the A button. That's it! This allows the player's hands to rest comfortably with each thumb hovering over just two touch points so that as soon as you see what you need to do, your hands are ready to do it.

But the fact that success in *WarioWare* only requires that you press some combination of five buttons in no way equates to an easy experience. The game is intentionally hectic, the microgames require mental dexterity, and they can be extremely challenging.

Where *WarioWare* truly becomes a joy is when you reach a Zen-like flow state. A prompt splashes across the screen, your eyes tell your brain whatever the hell is happening (let's say, a photo-realistic Japanese man is trying to deflect a falling watermelon), and just in time, your brain tells your hands to deflect that melon! You win, and it's on to the next game in literal seconds.

There's no telling what game will come next, there's no preparation, no run-up to play, no downtime, no loading. There's just fun. Simple, absurd fun.

Add to this beautiful formula *WarioWare*'s chaotic soundtrack, its absurd humour and irreverent tone, its love for Nintendo properties of yesteryear, and you find something truly special. *WarioWare* is a game which proved that Nintendo, a toy company which was more than a hundred years old when the game debuted, could still surprise its fans with something totally unexpected. ✱

» [Mega-CD] The Personometer supposedly tells the pair the mark's birthday. In fact, you enter it before the game.

» The game was fully ready to go – even the manual and packaging had been designed.

PENN & TELLER'S SMOKE AND MIRRORS

Intended as a bit of magical mischief, this game pulled its own disappearing act before dramatically returning as the heart of an annual charity fundraiser

» [Mega-CD] Plenty of video footage is contained on the two discs, including the secret intro for owners.

Words by Nick Thorpe

IN THE KNOW

» **PUBLISHER:** ABSOLUTE ENTERTAINMENT

» **DEVELOPER:** ABSOLUTE ENTERTAINMENT

» **SYSTEM:** MEGA-CD, 3DO, PC

» **DUE FOR RELEASE:** 1995

» [Mega-CD] This empty road, for eight hours. Tapping left every so often. All for one point.

Most celebrity licensing deals lead to fairly obvious games – while oddballs like *Shaq Fu* and *Go Go Beckham* do exist, chances are if Mike Tyson's on the cover you're going to be playing a boxing game. Penn & Teller, though? For all of the fame the popular pair of magicians have acquired, they don't quite fit any existing genre easily. That didn't stop Absolute Entertainment from approaching Penn & Teller with a licensing deal, though.

Speaking in the February/March 1995 issue of *Sega Visions*, Penn Jillette explained that while the duo had turned down licensing deals in the past, they chose to accept Absolute's offer because their creative input was sought. He also claimed that the team had told them that they had "no ideas" at the start of the process, but that the developers had reassured them that, "We know what the technology can do. We know what the users really want. We know what good play is," which he described as "really important stuff that we knew nothing about". Together, the pair worked "six-to-eight-hour sessions, three or four days a week, for seven weeks" on the game.

The result was a compilation of six minigames, many of which involve the duo's tricks and scientific scepticism, and are designed with an unsuspecting second player in mind. For example, What's Your Sign involves the duo guessing the unsuspecting player's birthdate, while Mofo The Psychic Gorilla can guess their card – with your help, of course. Buzz Bombers is a two-player shoot-'em-up that you can secretly rig in your favour, and Sun Scorcher is another shoot-'em-up featuring "Thermo-graphics" that you can pretend have broken your TV and burned your hand.

The titular minigame Smoke And Mirrors is a beat-'em-up, which is actually played fairly straight. Penn and Teller set out to expose Stinkbomb and Rot (who are *definitely* not Siegfried and Roy), who claim that magic is real, beating up various magicians along the way. Of course, Impossible Mode lives up to its name, as Lou Reed will always kill both players with lightning blasts from his eyes. However, the most notorious minigame is easily Desert Bus. As Penn Jillette explained in a

SUBSTITUTE SORCERY

PAUL DANIELS' MAGIC SHOW

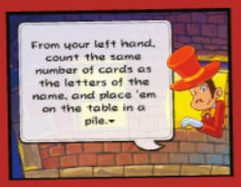
1984, ACORNSOFT

■ Looking for a decidedly more British magical outing? This bit of software for the Acorn Electron and BBC Micro is designed to help you put on your own show, with ten tricks including card and coin tricks.

MAGIC MADE FUN

2006, EIGHTING/TENYO

■ If you're looking to learn your own tricks, this Nintendo-published DS game is there to teach you. In fact, the game even came packaged with a deck of playing cards so you could practice without your DS.



PENN & TELLER VR

2019, GEARBOX SOFTWARE

■ Penn and Teller did finally get a videogame released, and this PC outing is exactly what you'd expect – a means of playing a variety of magic tricks on what are described as "your soon-to-be-ex friends".

» [Mega-CD] You can see the Thermo-graphics warning flashing in the bottom-right corner.

» [Mega-CD] Penn distracts a street performer so that Teller can sneak past him.

» [Mega-CD] Player one always wins at Buzz Bombers, but you can switch that if your friend gets suspicious.

2006 podcast, this was designed by TV writer Eddie Gorodetsky as a retort to the moral panic over videogames. Gameplay consisted of an eight-hour drive on a straight road between Tucson and Las Vegas, using a bus with a slightly wonky steering wheel and a top speed of just 45mph.

Absolute had chosen the Mega-CD as the lead platform, largely because it was "all we knew how to program" according to programmer Mark Morris in a 2009 interview with 1up.com. This version slipped from its intended Christmas 1994 release date to July 1995, but review copies did make it to magazines. *VideoGames* gave it 6/10, saying that, "Absolute should be commended for taking a chance and releasing this weirdly unique interactive experience," but that its "biggest flaw is that it really is little more than a series of jokes". *GamePro* was more positive, feeling that "as hard as it is to master, *Smoke And Mirrors* is easy to laugh with".

In the 1up.com interview, Mark Morris explained that Absolute was in dire financial trouble because of an "ocean of [*Goofy's Hysterical History Tour*] cartridges that nobody wanted" and despite the fact that it was ready to ship, the company couldn't afford to release the Mega-CD game, nor finish the announced 3DO and PC versions. Nobody picked the game up out of bankruptcy either, owing to the poor state of the Mega-CD market. The game ultimately made its way into the hands of players in 2005, when a review copy was uploaded online.

"As hard as it is to master, Smoke And Mirrors is easy to laugh with"

Since then, the game has achieved a degree of fame in large part due to Desert Bus. Originally, Absolute Entertainment had planned a contest in which players could send in proof of completing the eight-hour trip to win a real desert bus ride with Penn and Teller themselves. However, the real value in Desert Bus has been Desert Bus For Hope, an annual charity fundraiser established in 2007. The event is held every November and involves marathon sessions typically running to 150+ hours, amounting to over 2,500 hours of cumulative tedium and over $10 million in donations made to the Child's Play charity to date – not bad for a game that made no money for its developers. ✱

M2 ShotTriggers
エムツー ショットトリガーズ
CHASING PERFECTION

» [PlayStation 4] Across the *M2 ShotTriggers* release, the care, respect, and affection for the source games is vividly evident in the quality of the ports.

» [PlayStation 4] Those bullet patterns might look impossible, but thanks to M2's wonderful Beginner modes, you'll soon find yourself outplaying your own expectations.

IN BREATHING NEW LIFE INTO SOME OF THE SHOOTER GENRE'S MOST IMPORTANT WORKS, JAPANESE STUDIO M2 HAS EQUALLY SET A STUNNING NEW STANDARD FOR WHAT A MODERN PORT CAN BE. BUT WHAT GOES INTO AN M2 SHOTTRIGGERS RELEASE?

WORDS BY WILL FREEMAN

Arcades used to confidently stand as the place to go to see the newest and greatest games before they made their way to consoles. Amusement centres across the world were destinations players would head to to taste the medium's cutting edge. In time, the console ports would come, but they were by default considered inferior to the original coin-op releases. After all, from the Seventies through well into the Nineties, arcade machines capably outperformed their console cousins when it came to pure technological muscle.

It was a time when eager publishers would assert the 'arcade accuracy' of their home releases, but the promise was too often not quite met by reality; consoles simply lacked the chops to deliver what an arcade board could bring. As such, over time an assumption emerged that ports are lesser works by default.

Recently, however, some have shown that with hard work and a lot of craft, ports can bring remarkable quality, even exceeding the standards set by their source material.

You only have to look to the Japanese development studio, publisher and porting powerhouse M2 to see that quality ports are much more than just possible. With its highly regarded *M2 ShotTriggers* imprint in particular, which debuted some eight years ago with *Battle Garegga Rev.2016*, the team have demonstrated that console ports of the very best classic arcade shooting games can not just equal, but even trump their source material. The range brings something of a focus on danmaku (bullet hell), which M2 believes is particularly important to the form's forward journey. "I think that danmaku games played an important role in the history of STGs, in that they revitalised the genre that had fallen out of public favour in the Nineties," offers *M2 ShotTriggers* director Kazuki Kubota. "Although it's hard not to focus on their high difficulty level when we talk about danmaku, we must also recognise that the spectacular visuals created by the bullet patterns helped STGs in winning back the attention of the arcade crowd. As such, I consider it an essential part of the STG genre today; though that's not to discount the importance of non-danmaku STGs in any way, of course."

> "WE ALSO THINK ABOUT THE PART WE PLAY IN PASSING DOWN A SPECIFIC CULTURE"
> **MASAYUKI FUKUI**

Danmaku or otherwise, it is fair to say M2 had mastered porting long before it turned its attention to some of the most celebrated works by influential shooter studios such as CAVE, Raizing (now known as Eighting), Toaplan (its properties are currently handled by Tatsujin) and Compile.

If the M2 name rings a bell, it might be because you've played one of the company's superb *Sega Ages* remakes, or one of its classic ports for the Wii's virtual console, or put some time into an entry in the *3D Classics* series, which brought esteemed vintage games with new features and stereoscopic 3D flourishes to Nintendo's 3DS. You may even own one of the Mega Drive Minis that M2 was involved with.

Simply put, M2 has put decades into refining its porting process since the Abiko-based team was established in 1991. M2's staff have also worked on several original games too, including *Gradius ReBirth* and *Contra ReBirth*, both of which carefully modernised celebrated arcade series for the WiiWare platform.

MASAYUKI FUKUI

» As well as being an *M2 ShotTriggers* planner and programmer, Masayuki Fukui has a passion for sharing shooting games as a cultural artefact.

KAZUKI KUBOTA

» *M2 ShotTriggers* director Kazuki Kubota can still feel nervous when sharing new M2 modes and features with a game's original designers.

» [PlayStation 4] Works by the likes of CAVE, Toaplan, and Eighting remain stunning in their detail, depth and nuance.

It is the studio's *M2 ShotTriggers* output, however, that has pushed the concept of porting into dazzlingly new territory. The series has consistently impressed, even dismantling the boundaries that have traditionally separated purebred porting and the development of new games. Every *M2 ShotTriggers* release so far has been focussed on traditional shooters that court tremendous regard and heritage; the entire focus is on arcade shooters, or those on consoles that are profoundly informed by the arcade model. The list of current *M2 ShotTriggers* titles is utterly remarkable not only in granting a far wider audience access to superb titles previously hemmed in by collector prices and limited global availability – the studio has also put considerable effort into making these deeply nuanced shooters' inner workings more transparent, while building new 'arranges' (think 'remixed modes') that cater to shmup novices without diluting the genre authenticity served up by the original versions.

A typical *M2 ShotTriggers* release, then, brings the mainstay arcade mode of the title game, exquisitely, lovingly reproduced to precision levels almost never seen before. Then you get the likes of international variants, rare alternative arranges and special modes that might break a game down into bite-sized chunks or present a Training mode. There are also entirely new arranges developed internally at M2 that reshape the flow, playstyle or tone of a game, along with all manner of meticulous display options for the likes of scanline control, as well as alternative musical scores and archival

PERFECTION-PERSONIFIED

WHAT MAKES AN M2 SHOTTRIGGERS RELEASE QUITE SO SUBLIME?

DATA CURTAINS

M2's 'gadgets' are well known by shmup devotees. They might appear overwhelming, but communicate all kinds of useful information.

ACCURATE MOVEMENT

Response, input lag, slow-down and more are perfectly replicated, letting the games shine while optimising your ability to play at your best.

DISPLAYING BRILLIANCE

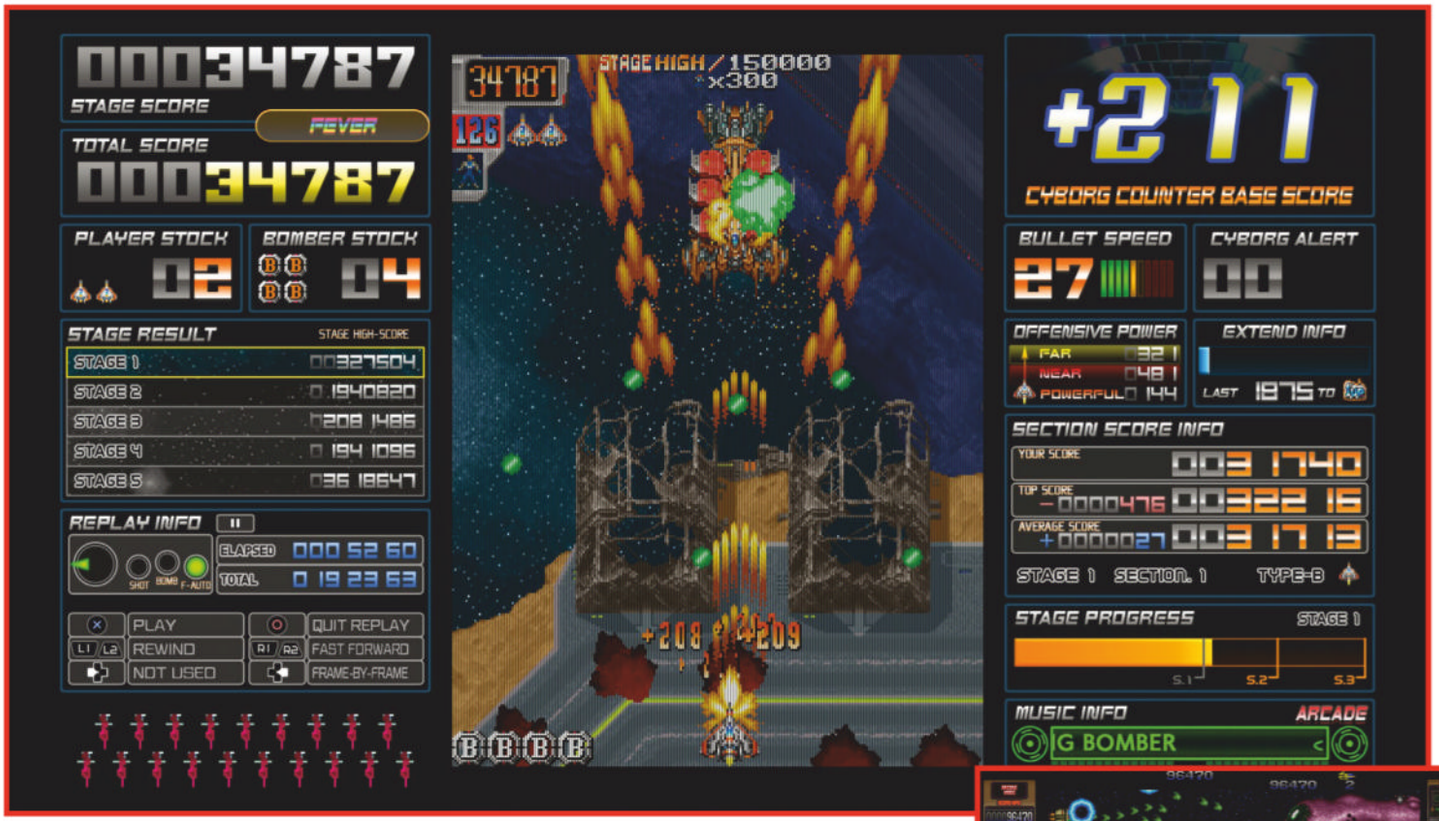
M2's meticulous and generous display settings let you tinker with screen rotation, pixel smoothing options, scanline behaviour and much more besides.

BEE AWARE

A new stage map lets you know where you are – and in the case of *dodonpachi DAI-OU-JOU*, where secret bee items hide.

SOUND AWARENESS

In letting you switch out distinct musical scores new and old, *M2 ShotTriggers* releases let you toy with the atmosphere as you wish.



» [PlayStation 4] Across the *M2S hotTriggers* release, the care, respect, and affection for the source games is vividly evident in the quality of the ports.

» [PlayStation 4] While the swarms of gaudy ordnance are rightly your vision's first priority, pausing to view the level backgrounds reveals worlds bristling with design craft.

extras. Some of the entries in the series even bring multiple related games in a single package. And there's also the now famous 'gadgets', which offer a wild spread of precise, intricate, customisable in-game UI that exposes much of the previously obscure inner workings of these most nuanced of shooters.

> "I CAN NEVER STOP FEELING NERVOUS WHEN WE SHOW OUR ARRANGE GAME MODES TO THE ORIGINAL DESIGNERS"
> **KAZUKI KUBOTA**

And then you get M2's wonderful Super Easy arrangements, which do exactly what they say on the tin; albeit with unmatched aplomb. Typical shooting game easy modes simply drop bullet count, enemy numbers and resilience, and perhaps speed. It seems a sensible approach, but that method can also undermine the player's ability to explore scoring mechanisms, and thus undermine the very experience of enjoying a shooter. Keeping a score multiplier for back-to-back kills rising, for example, is hard when there's simply not enough enemies on the screen.

Not so *M2 ShotTriggers'* Super Easy modes, which manage to preserve the authentic experience of the original game, while stealthily training the player to become more adept at the broader genre, by throwing carefully considered bullet patterns at the player that are easily navigated, but close in form to the much denser curtains of ordnance seen in the fully fledged arcade mode. With *M2 ShotTriggers* bringing us stunning ports of heavyweight titles such as *Ketsui*, *Battle Garegga*, *dodonpachi DAI-OU-JOU*, *Dangun Feveron*, *Mahou Daisakusen* (AKA *Sorcer Striker*), *Zero Wing* and *Flying Shark*, the fact that those games are prised open for a far wider audience is beyond encouraging.

By sharing the masterworks of seminal shooter powerhouses such as Toaplan, CAVE and Raizing, the series might even convert more players to the joyful challenge of mastering the form, which could help the current wave of indie studies powering a global renaissance for the genre.

All of which means the *M2 ShotTriggers* catalogue is something like a library of interactive encyclopaedias that each pay homage to historically important – and delightfully fun – shmups.

Some, such as the *Aleste Collection*, go further still, compiling significant numbers of games from celebrated series. *Aleste Collection* includes four classic shooters from the Compile series alternatively known in the West as *Power Strike*, and a brand-new Game Gear version developed entirely by M2. Again, 'port' doesn't quite go far enough.

All of that effort begs a rather obvious question: why go quite so far, when many players might be entirely happy with a quality port of one arcade mode, and perhaps an alternative soundtrack? With slight irony, the answer is about the potential of M2's desire to add its own original shooting game IP to the line.

"I think the initial motivation for starting up the *M2 STG* line was that we wanted to have a brand under which we would publish products by ourselves," remembers Kubota. "It just so happened that the actual game we would ▶

» [PlayStation 4] Even if you have just a passing interest in arcade games, at least one *M2 ShotTriggers* should grace your shelves. One sublime representation of bullet hell can't hurt.

» [PlayStation 4] All those numbers down the side offer tremendous feedback on the game systems and your interaction with them; though they are often best digested via run replays.

» [PlayStation 4] *Mahou Daisakusen* is a standout on the label in offering a very different blend of bullet hell – and in not getting a physical release.

release under that brand was going to be *Battle Garegga*, which gave us the idea of making it an STG brand. That's how I remember it, at least. Such being its origin, I believe one of our aims is to heighten the brand recognition through continuous releases, so that when we release our original games – such as *Ubusuna* – under the same *M2 STG* brand, the users will see it as a mark of quality."

> "WE TAKE GREATEST CARE IN DESIGNING THE SUPER EASY MODES"
> **KAZUKI KUBOTA**

We'll touch on *Ubusuna* later. For now, it is worth noting that perhaps Kubota is being modest. That's because, very evidently, a lot of craft and love goes into these games. That might help the standing of M2 as a shooter developer in its own right, but equally, the effort appears to come from a heartfelt desire to give the genre the attention it deserves, preserve its legacy and ensure it thrives.

"First off, our motivation behind releasing the *M2 STG* ports is the wish that more players may enjoy STGs. This is partly driven by business considerations, but we also think about the part we play in passing down a specific culture," explains *M2 ShotTriggers* planner and programmer Masayuki Fukui. "To ensure that diverse genres have their place in the market ultimately helps the games industry as a whole too."

Equally, says Fukui, M2 is committed to sharing the shooter genre's potential for fun with a far wider audience. When many of us think of shmups – and particularly arcade bullet hell – we might quickly find our heads filled with ideas of intense difficulty, impenetrability and experiences far outside the realm of normal gaming. Yet according to Fukui, he and his team believe the genre's coupling of simplicity and depth offers an equation for fun that is fundamental and universal to all videogames. As such, there's every chance a great many players of other gaming forms may find deep pleasure in shooting games, if given an appropriate gateway. *M2 ShotTriggers*, then, endeavours to provide that gateway via packages that serve every kind of player, from world record troubling genre devotees to absolute amateurs.

"As for the new game modes, the reason we include them is because we want to make our ports more accessible, so that the timeless merits of the respective original games can be more widely appreciated in modern days," he continues. "We have to reach the audience in the first place, and providing novel experiences through additional game modes is one of our ways through which we aim to achieve that.

"When I design new game modes, I would scrutinise the original game and think about what arrangements I can make to derive such a new experience. Sometimes I come up with new ideas in the process, but I have also used elements recovered from my personal notebook I've been keeping for a long time. Before I joined the industry, I used to prototype

THE STORY SO FAR

EVERY M2 SHOTTRIGGERS PORT RELEASED SO FAR

ALESTE COLLECTION

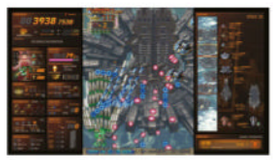
■ Porting four games from Compile's acclaimed *Aleste* series clearly wasn't enough for M2. *Aleste Collection* also included a brand-new shmup, *GG Aleste 3*. While most played it on the PS4 and Switch editions of *Aleste Collection*, it also arrived on a special Game Gear Micro bundled with special editions.

BATTLE GAREGGA REV.2016

■ Famed for depth rarely seen in other shooters, Raizing's *Battle Garrega* is famously complex. It has taken the shmup community years to unpick. And then this favourite of the genre's most obsessive fans was cracked open for a wider audience by M2. It even got a US release.

DANGUN FEVERON

■ There aren't many shooters like *Dangun Feveron*, otherwise known as *Fever SOS*. CAVE's disco-themed shmup exudes character, and plays very lively. Boasting a timed 'caravan' mode, it's one of the *M2 ShotTriggers* releases to see a Western release, thanks to Limited Run Games.



DODONPACHI DAI-OU-JOU RE:INCARNATION

■ CAVE's most esteemed work may be the hard, awe-inspiringly purebred *dodonpachi DAI-OU-JOU*. Marking *dodonpachi*'s M2 debut in late-2023, it may offer the most refined, complete *M2 ShotTriggers* release yet. There's enough new and old arranges to keep you occupied for years to come.

ESP RA.DE. PSY

■ Originally released as *ESP ra.de.*, this is perhaps CAVE's most welcoming true arcade shooter, playing a prelude to the popular *ESPgaluda* games that followed. It's also a very, very good shmup, that is sometimes overshadowed by the reputation of heavy hitters like *dodonpachi* and *Ketsui*. Don't miss out on it.

STGs based on ideas I'd set down in my notebook. I did it because I love STGs, so at the end of the day, I could also say that what motivates me is the charm of the genre itself.

The variety of gameplay is another important aspect for Fukui. "The Arrange S mode of *dodonpachi DAI-OU-JOU Re:incarnation* is a good example of this, in that it provides gameplay much distinct from the original," he explains. "My goal here is to let the players discover different aspects of the original game through the new gameplay experience. For instance, when the original game features very unforgiving, arcade-y difficulty, a more relaxed, console-oriented mode that gives the player greater leeway can make a good contrast. The Dual mode in our version of *Mahou Daisakusen* is one such example."

For Fukui, adopting the mindset of creating an entirely new game guides much of his process of building these new arrangements for *M2 ShotTriggers* releases. *Dodonpachi DAI-OU-JOU Re:incarnation* marks the most recent addition to the series, bringing one of CAVE's most highly regarded, incessantly demanding shooters to a vast potential new audience. Opening up that game – as seen with so many other *ShotTriggers* releases – means offering something like a spread of reinterpretations of the original title. Some arranges may strip things back for a more minimal offering, evoking the genre's earlier history, before all those clouds of bullets swarmed into the form. That's exactly what ▶

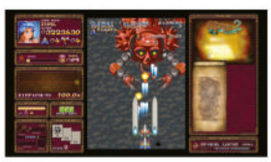
» [PlayStation 4] The *M2 ShotTriggers* compilation releases such as *Aleste Collection* offer a remarkably generous bang-to-buck ratio.

» [PlayStation 4] M2's *Deathtiny* collection of *Ketsui* ports and new arranges offers up one of the most demanding, refined bullet hell experiences there is.

» [PlayStation 4] *ESP ra.de. Psy* served as a prelude to the later *Espgaluda* and *Espgaluda II* – a duo of games we'd love to see get the M2 treatment.

KETSUI DEATHTINY - KIZUNA JIGOKU TACHI

■ As CAVE's grittiest military shmup, *Ketsui* is a genre titan. Its unrelenting barrage is a joy to face off and, with M2's *Deathtiny* edition, it was offered in myriad new ways, and got a US release. This package offers the ultimate edition of one of the genre's greatest works.



MAHOU DAISAKUSEN

■ Also known as *Sorcer Striker* in the West, 1993's *Mahou Daisakusen* also comes from Raizing. Raizing had formed from staff from both Compile and Toaplan, and you can feel a little of the *Aleste* series within its DNA. M2's version is the only *M2 ShotTriggers* release to be exclusively digital.

TOAPLAN ARCADE GARAGE: HISHOU SAME! SAME! SAME!

■ The Toaplan Arcade Garage sub-label focusses on earlier games from Toaplan. Here you get several versions of *Hishouzame* and *Same! Same! Same!*, known in the West as *Flying Shark* and *Fire Shark*. Tough and of their time, both were key to the evolution of their genre.

TOAPLAN ARCADE GARAGE: KYUKYOKU TIGER-HELI

■ As with *Hishou Same! Same! Same!*, here we find refined ports of two shooting games, this time in the form of *Tiger-Heli* and sequel *Twin Cobra*. Again, these mid-Eighties releases are highly important to the evolution of their genre. And Limited Run is bringing this West soon.

TOAPLAN ARCADE GARAGE: ZERO FIRE

■ As the title suggests, the third *Toaplan Arcade Garage* release compiles versions of the influential studio's horizontal shooters, *Zero Wing* and *Hellfire*. Both have aged tremendously well, playing vibrantly and bringing something highly distinct – and wonderfully realised – to modern audiences.

DARING TO DREAM

IMAGINING OUR ULTIMATE M2 SHOTTRIGGERS SHOOTING GAME PORT

As M2 continues to unleash remarkable ports of acclaimed shooters with deep roots in the Japanese arcade tradition, at **Retro Gamer** we can't help but wonder what it might do with a Western game informed by similar genre origins. And it's too tempting not to wonder what an *M2 ShotTriggers* release of *Turrican* might offer. Originally developed by German outfit Rainbow Arts for the Commodore 64, the vibrant run-and-gun debuted in 1990, taking design cues from *Metroid* and *Psycho-Nics Oscar*, and inspiring numerous ports, sequels and imitators. We can only dream what an *M2 ShotTriggers* version of *Turrican* might include, but we'd love to see a handful of different versions of the original *Turrican*, all ported to M2's meticulous standards, and resplendent with the extras, settings and widgets that have made ShotTriggers such a celebrated series. We'd also love to see some modern arranges of *Turrican*, maybe one of M2's Super Easy reworkings, and perhaps even the famed demo version Rainbow Arts released in 1989. We wouldn't complain if a few versions and reworkings of *Turrican 2*, *Super Turrican* and more made the cut – but even in this hypothetical suggestion, that might be too much to cram on a single disc.

[Mega Drive] *Turrican* was originally ported numerous times, with UK developer The Code Monkey's handling the Mega Drive version seen here.

» [PlayStation 4] A disco-themed shooting game with highly distinct scoring? That would be CAVE's delightfully different *Dangun Feveron*.

» [Arcade] *SenXin Aleste* is the first entirely new game off the *M2 ShotTriggers* line – and for now, an arcade exclusive.

Fukui and his colleagues had in mind when designing the aforementioned Arrange S mode. Other reworkings, such as *dodonpachi DAI-OU-JOU Re:incarnation*'s Arrange EX, give more experienced players a fresh take on what the game can be.

It's worth returning for a moment to the aforementioned Super Easy modes, which might well offer the most accessible realisation of bullet hell ever realised.

"We take the greatest care in designing the Super Easy modes so that they let the players who have just started out have successful experiences; the feeling that they are playing skillfully," confirms Kubota. "If we aimed solely at making the game as easy as possible, there would be an infinite number of ways to achieve that, up to and including simply making the player ship invincible. Rather, we think it's important to be mindful about what sort of experience beginners would derive from the gameplay, and we continuously evaluate and fine-tune Super Easy modes, with Fukui-san leading the process."

As well as a strikingly clear understanding of the shooting game genre, and love for the craft of game making, M2 also has something else that helps its consistently impressive hit rate when it comes to shmups. And that something is considerable connections with the original teams.

"When we port a game as part of our *M2STG* line, we always try to contact the original creators and ask for their help wherever possible," continues Kubota. "During the *dodonpachi DAI-OU-JOU Re:incarnation* development, we were helped tremendously by people from CAVE including Mr Ikeda, Mr

» [PlayStation 4] They may only feature two games, but the Toaplan collections are extremely comprehensive.

Ichimura, Mr Wakabayashi, and also by former CAVE employees Mr Shohei Satoh (AKA Haruhata) and Mr Junya Inoue, as well as [Manabu] Namiki-san, who wrote music for the original game."

> "WHAT MOTIVATES ME IS THE CHARM OF THE GENRE ITSELF"
> **MASAYUKI FUKUI**

When it comes to porting a CAVE game, that is an incredible pool to be able to reach out to. Ikeda served not just as the game designer of the original *dodonpachi DAI-OU-JOU*, but also stands as one of the shooting genre's most admired directors. Ichimura, meanwhile, was one of *dodonpachi DAI-OU-JOU*'s two programmers, and has made significant contributions to numerous CAVE games.

Wakabayashi – another prolific CAVE creative – contributed to *dodonpachi DAI-OU-JOU* as lead graphic designer, while Satoh worked on the design and concept of the game's lead cast. Along with Ikeda, Inoue is one of CAVE's most famed staff in the shooting game community, having variously worked across Toaplan, CAVE and the related Gazelle as a graphic designer, character artist, audio producer and game director. Meanwhile Namiki has composed music for a remarkably large and diverse spread of shooting games, across all manner of companies.

That marks a profoundly well-suited spread of deeply experienced, talented voices to guide just one *M2 ShotTriggers* release. It's absolutely a key ingredient in the series' magical recipe.

"CAVE kindly provided us with the documents and source code used in the original development, and Mr Wakabayashi provided Japanese calligraphy that our artist used to create the new *Re:incarnation* logo," Kubota continues, detailing the collaboration. "We also interviewed people from the original team, and asked what the development was like. The conversations were included in the booklet that came with the limited edition of *Re:incarnation*. We had the entire product looked at by Mr Ikeda just before its final release, and he helped us by supervising the contents. I can never stop feeling nervous when we show our arrange game modes to the original designers."

Those nerves are beyond understandable, when you consider the clout of the games – and their creators – that are selected for an *M2 ShotTriggers* treatment. "Without all the help from the people involved in the original game's development, *dodonpachi DAI-OU-JOU Re:incarnation* would never have been possible," Kubota concludes.

For now, the M2 team have plenty to keep themselves busy. Having already released 2021's arcade-exclusive *SenXin Aleste* under the *M2 ShotTriggers* label – an original game developed by M2 that extends the series sometimes known as *Power Strike* in the West – they are working on another fresh creation for the imprint. *Ubusuna* is a shooter, but not too much else is known. It was first confirmed almost a decade ago, and has *Ikaurga*, *Radiant Silvergun* and *Gradius V* director Hiroshi Iuchi at the helm.

If M2 has proved anything through the *ShotTriggers* line, it is that the team has a deep understanding and respect for the genre, underpinned by a sincere passion for shmups. So whether *Ubusuna* carries the *ShotTriggers* label or not, the chances that it will be brilliant are high. ✱

ALESTE WE FORGET

NOT EVERY SHOTTRIGGERS RELEASE IS A PORT

■ While M2 has built its reputation on the quality of its ports, the studio has over the years explored making games of its own. Indeed, while the *M2 ShotTriggers* line has been defined by its exquisite ports, in 2021 the team released an arcade original under the sub-label. That game was *SenXin Aleste*, an official continuation of the popular *Aleste*/*Power Strike* series. M2 presently holds the licence to the *Aleste* series. In 2020, M2 had already released *Aleste Collection* under the *M2 ShotTriggers* banner, which included *Aleste*, *GG Aleste*, *GG Aleste II*, *Power Strike II* and *GG Aleste 3*. The latter was an entirely new game made by M2, and came on an exclusive Game Gear Micro in *Aleste Collection*'s most premium edition. Then came *SenXin Aleste*, arriving in Japan's game centers via Sega's ALL.Net P-ras MULTI Ver. 3 live arcade system, where it was greeted with a bounty of praise. With all manner of nods to earlier games in the series, *SenXin Aleste* modernises the series by nudging it further into true bullet hell territory. You'll still have to make the trip to Japan to play it for the foreseeable future, alas, as no console ports or other international versions have been announced.

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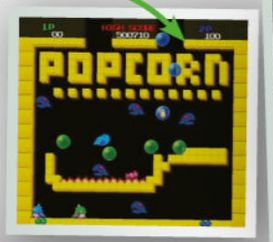
retro GAMER's FAVOURITE...

XBOX LIVE ARCADE GEMS

The Xbox 360 online store will close in July, so the clock is ticking if you want to grab games before they're gone forever. To help you spend your pennies, we've compiled our favourite XBLA titles that are not available on disc or playable via Xbox backwards compatibility

BUBBLE BOBBLE NEO!

For Bub and Bob there's only one thing worse than the Cave Of Monsters and that's the XBLA Abyss. Rescue them and you'll receive the 100 original arcade stages, plus 100 arranged stages which support up to four co-op players. There are also two sets of DLC to save, featuring *another* 100 expert stages.



RAYSTORM

The Taito shooter series that's not *Darius* rocked the Xbox 360 with this stunning HD update of the second game, originally released in 1996. Besides upgraded graphics it features the three main ships plus a fourth one, R-Gear, that's armed with homing missiles. If you know, you know – if you don't, just enjoy blowing stuff up.

BURNOUT CRASH!

The Crash mode that debuted in *Burnout 2* was enough of a minigame sensation that it led to this standalone release. As before, the aim is to plough through busy intersections, causing as much damage as possible. This is already delisted on the PS3 (in PAL territories at least), so buy it before it's a total write-off.

THE DISHWASHER: DEAD SAMURAI

If you enjoyed *Alien Hominid* and *Castle Crashers* on XBLA then you need to play this gory hack 'n' slash opus which was the winner of Microsoft's inaugural Dream.Build.Play contest. It's difficult and excessive yet stylish and compulsive. The sequel, *Vampire Smile*, is on XBLA too, but that's also available on other platforms.

HAPPY TREE FRIENDS: FALSE ALARM

Based on the animated web series, this is a fun spin on *Lemmings* where you have to guide our forest friends through several perilous stages, using your god-like abilities to influence the characters and the environment. The game was delisted on Steam years ago, but survives on the Xbox 360 – for a little while at least.

THUNDER WOLVES

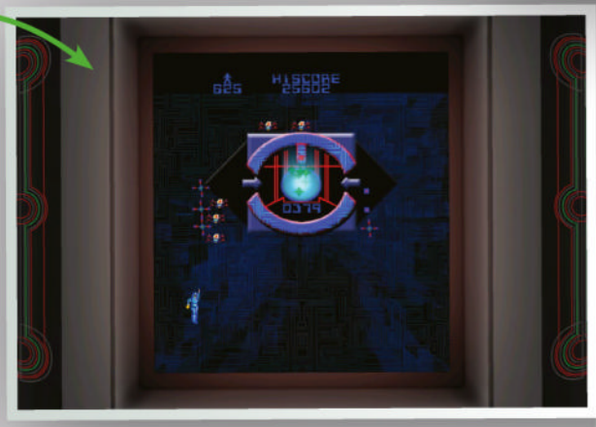
Evoking memories of the later 3D entries in EA's *Strike* series, *Thunder Wolves* is a neat helicopter shooter featuring 13 intense missions. The behind-the-chopper viewpoint may suggest a sim, but worry not – this is a proper old-school arcade blaster in which realistic physics are jettisoned in favour of mass destruction.

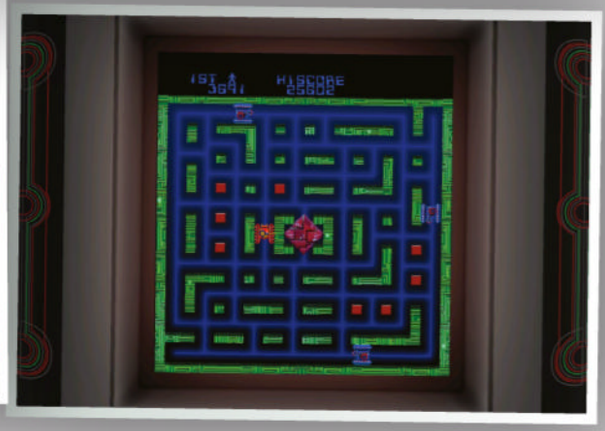
FRUIT NINJA KINECT

Flash back to 2010 when everyone was slashing fruit on their phones. A game designed for touchscreens wasn't an obvious fit for home consoles, until the arrival of the Kinect peripheral. The sequel is available on Xbox One, but if you want the juicy not-from-concentrate original then get it on Xbox 360 – but be quick!

TRON

Midway's movie licence and its four subgames infiltrate the Xbox 360, available with both regular and enhanced graphics, and supplemented with local and online multiplayer modes. Perhaps fittingly, the game is somewhat concealed on XBLA – it doesn't appear if you browse for it, but shows up when you search for it by name.





VIGILANTE 8 ARCADE

Fans of the two previous *Vigilante 8* games, released in the late-Nineties, would do well to overlook the simplistic cover art and download this 360-exclusive third entry before it drives off into the sunset. Featuring four-player local split-screen and eight-player online battles, this is a perfect party game; a social smash-'em-up.

DORITOS: DASH OF DESTRUCTION

This free Doritos snack tie-in has long been delisted, but you can still download it if you grabbed it when it was available prior to October 2010. We've included it here purely as a reminder to check your Xbox 360 download list *right now* and salvage any previous acquisitions before the store is shuttered for good.

RANDAL LINDEN

The industry in the Eighties and Nineties needed programmers with great technical knowledge and the ability to learn new hardware. One of the best was Randal Linden, who tackled impossible ports and specialised in emulation

Words by Andrew Fisher

"The amazing thing about computer science is that it's always advancing and progressing, so there's always something new to learn and do," says Randal when asked about the technical challenges left for him. "Early in my career I used to think that I had done a wide variety of projects, but with the huge growth of the computing field, I realised that I had only scratched the surface of technology." That 40-year career has gone from Commodore PET to Switch, creating memorable titles including SNES *Doom*, the first C64 emulator for the Amiga and the Amiga's stunning conversion of *Dragon's Lair*.

» Williams gave US SNES users a blood-red *Doom* cartridge; Ocean's European release was plain grey.

Can you tell us about your first ever encounter with a computer?
My first experience was in junior high when our school library received three Commodore 4032 PETs. The librarian wrote a program that allowed students to schedule time to use the computers and I spent many hours there studying and learning all about the machine – of course, I also played games, my favourite was a clone of *Space Invaders*.

What computers did you first have at home?
My very first home computer was a Texas Instruments TI 99/4A and my favourite game for it was called *TI Invaders*, a clone of *Space Invaders* with unique-looking enemies. My second home computer was the Commodore C64 and my third was the Commodore Amiga 1000 – then an Amiga 2000 and Amiga 500 as well! It was many years into my career before I purchased (and switched to using) a PC as my primary machine.

When did you write your first game?
I wrote my first game when I was 12 or 13 and it was called *Barriers*. In the game, you controlled a ship flying towards a barrier wall and had to blast holes in the advancing wall so you could fly the ship through without taking damage. The game was all machine language and written on the Commodore PET 4032 at school.

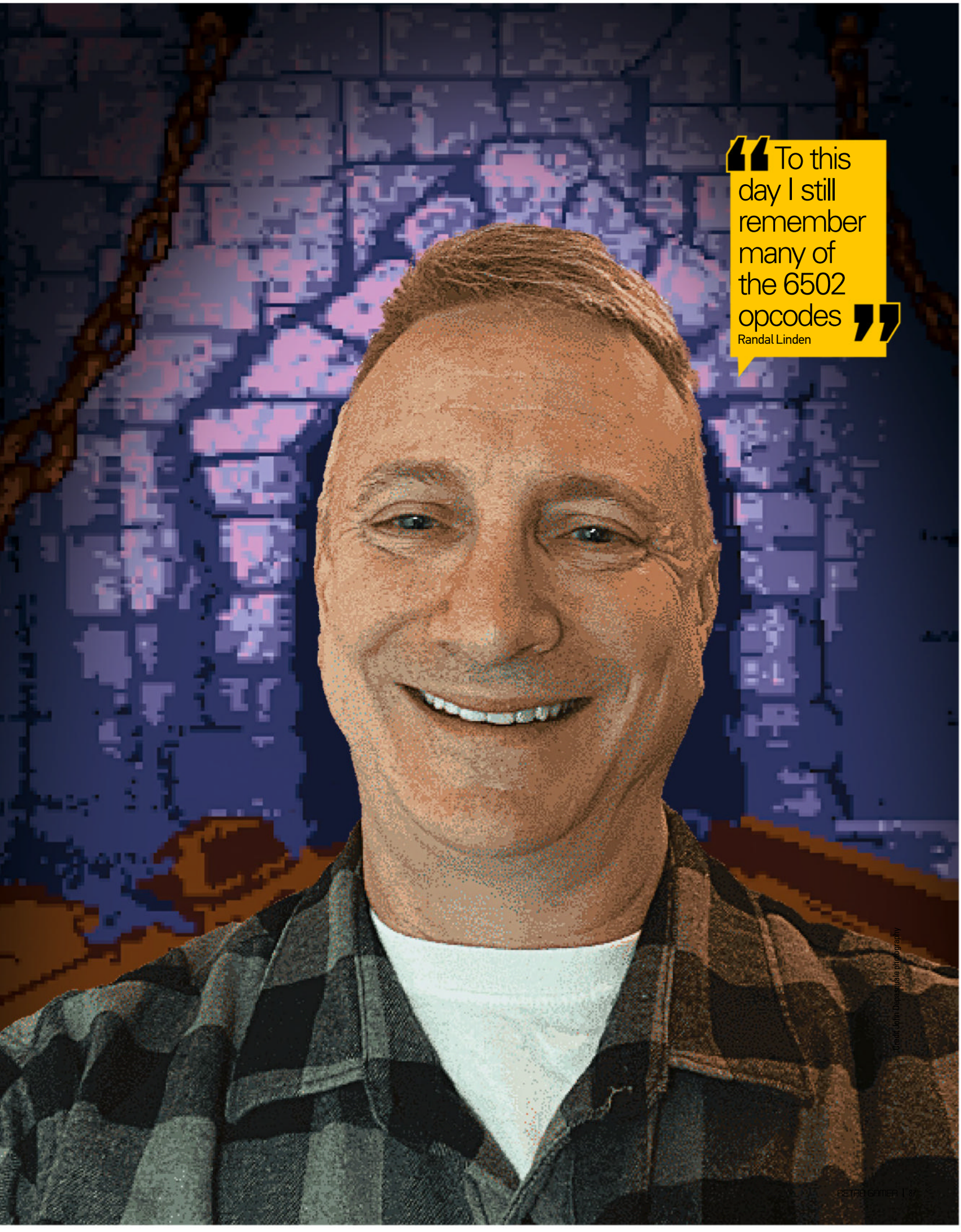
Your C64 game *Bubbles* is currently unavailable online – do you have anything left of it, or know where it might be found?
Bubbles for the Commodore 64 was my first published program. An arcade game based on *Centipede*, the code was all hand-written 6502 back when there were no compilers for the C64/C128, assemblers were just becoming commonplace, and linkers were unheard of. To this day I still remember many of the 6502 opcodes along with how to calculate the branch destinations. EA = NOP, A9 = LDA, 60 = RTS, 20 = JSR , 00 = BRK, D0 = BNE… those were the days! I have one copy of *Bubbles* on a 5 1/4-inch floppy disk and another on a cassette. When I find a suitable place (or person) that can try and read the image, I'll send the media to them for processing. With some luck, I'll be able to share *Bubbles* so everyone can enjoy my first game title.

Can you tell us about the first job you had in the computer industry?
When I was 13, I worked part time at Syntax Software based out of Toronto, Ontario, Canada. They published *Bubbles* and gave me a job. While there I was co-writing an unreleased *Star Trek* game and working on game development tools.

What made you write a C64 emulator for the Amiga?
When the Amiga was first introduced, there were very few programs available for the machine. Conversely, the Commodore 64 had been around for a number of years and accumulated a large library of software. I wanted to provide a way for people to use that existing library of titles on their new Amigas.

There was a cable to attach a C64 disk drive – how was that made?
They were actually hand-built in the basement of the ReadySoft office, which was in Thornhill, Ontario, Canada.

What were the most difficult parts of creating The 64 Emulator?
The interface cable was a great feature because it allowed people to use their existing disk-based software and files, but it required a huge


“To this day I still remember many of the 6502 opcodes”
Randal Linden

SELECTED TIMELINE

- **BUBBLES** [1983] C64
- **THE C64 EMULATOR** [1987] AMIGA – PROGRAMMING
- **DATASTORM** [1988] AMIGA – DISK COMPRESSION
- **DRAGON'S LAIR** [1989] AMIGA
- **ESCAPE FROM SINGE'S CASTLE** [1990] AMIGA
- **SWORD OF SODAN** [1990] GENESIS – THANKS
- **THE TERMINATOR** [1991] DOS – ADVISOR
- **WAYNE GRETZKY HOCKEY** [1991] NES
- **HOME ALONE** [1991] NES – GAME DESIGN, PROGRAMMING WITH PAUL COLETTA
- **WHERE'S WALDO?** [1991] NES – GAME DESIGN, AND PROGRAMMING WITH PAUL COLETTA
- **THE RED CRYSTAL: SEVEN SECRETS OF LIFE** [1993] DOS – THANKS/LAST AND LEAST
- **WWF WRESTLEMANIA** [1995] 32X – SPECIAL THANKS
- **DIRT TRAX FX** [1995] SNES – ADDITIONAL HELP
- **DOOM** [1995] SNES – PROJECT MANAGEMENT, PROGRAMMING
- **BLEEM!** [1998-2001] PC
- **BLEEMCAST!** [2000-2001] DREAMCAST – WITH ROD MAHER
- **QUAKE** [2002 – UNFINISHED] GAME BOY ADVANCE
- **CYBOID** [2016-] ANDROID
- **JURASSIC PARK: CLASSIC GAMES COLLECTION** [2023] VARIOUS – LIMITED RUN GAMES
- **ARZETTE: THE JEWEL OF FARAMOR** [2024] SWITCH – SPECIAL THANKS
- **FELIX THE CAT** [2024] SWITCH, PS4 AND PS5
- **ROCKET KNIGHT RE-SPARKED** [2024] SWITCH, PS4, PS5 AND PC

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» An advert for Syntax Software, featuring Randal's C64 game *Bubbles*. (Image courtesy of Frank Gasking/Games That Weren't.)

» [Amiga] Even getting into the *Dragon's Lair* is not easy.

» [Amiga] Dirk has died. Again.

amount of work to support because of the wide variety of copy protection methods and fast loader techniques. Reverse engineering a bunch of C64 titles to discover how their low-level loading and protection code operated required a lot of time and effort, but it was ultimately worth it!

Were you already a fan of *Dragon's Lair* before ReadySoft attempted its ambitious Amiga adaptation of the acclaimed arcade game?
I was a huge fan of *Dragon's Lair* from the moment I saw it at a local arcade across from my junior high school. One day I went downtown in Toronto and stopped in at every arcade looking for an original *Dragon's Lair* LaserDisc. I finally found the contact information for Cinematronics and was able to order a copy. I had previously started work on a Commodore 64 version of *Dragon's Lair* before I switched to Amiga development.

How did the animation and graphics of *Dragon's Lair* get compressed?
Thousands of individual animation frames were digitised from an original LaserDisc using an early version of the Sunrize Industries' hardware-based digitiser. A team of artists then cleaned and touched up each frame image which were processed and compressed by a custom toolchain I wrote – CAST, which stands for Cell Animation Sequencer Tool. The tool automatically handled compression for the animations when processing each sequence from the game. Basically, the backgrounds are separated from the foregrounds in a process called rotoscoping and then compressed. During gameplay, the software recombines the backgrounds and foregrounds to generate the final images. The original data was over 130MB (massive data for the time!) and compressed down to roughly 6MB across the six disks.

» [Amiga] A classic C64 BASIC program running in The 64 Emulator.

How did you cram so much extra data onto the floppy disks?
First, the disks were written using a custom format which allowed longer tracks of continuous data. Next, the disk drives used to create the disks were modified so they rotated at a slightly slower speed which allowed a little bit more data on each track of the media. Finally, the CAST software compressed all the data so it could fit onto the fewest disks possible. I designed and implemented the copy protection/DRM for the game, and it remained uncopyable for six months following release before a cracking group released an eight-disk version of the game, requiring two additional disks compared to the original!

How did you devise the helper arrows for *Escape From Singe's Castle*, and how difficult was it to link the two games into one longer game?
A few people suggested that *Dragon's Lair* would benefit from an easier way to play the game, so I added the directional arrows as an option for *Escape From Singe's Castle*. The linking support allowed the original *Dragon's Lair* to also be

» [NES] The small-scale graphics resembled the *Where's Waldo?* books, but the gameplay was incredibly repetitive.

installed onto a hard drive, so I had to deal with the copy protection when reading the original disks. This added a bit to the complexity of making things work seamlessly between the two titles.

Did you enjoy working on NES games for Bethesda, and were you disappointed with the reviews?
Writing programs for a cartridge-based console meant ensuring that my programs had no bugs because there was no way to patch the software after manufacturing. This was exciting but also stressful because it required great precision and care when programming and especially when debugging the games. Development used the Sculptured Software NDS2 hardware system in combination with custom software that I had written for previous work. I felt that the reviews were fair and balanced; both *Home Alone* and *Where's Waldo?* were technically complex games which used the MMC3 mapper technology, but that doesn't mean they were awesome fun to play.

> "The enhancements… made the PS1 games much closer to PS2 quality"
> Randal Linden

And *Wayne Gretzky's Hockey* was a conversion from the PC game?
I completed the entire project in six weeks.

When did you start developing for the SNES?
I started writing tools for SNES game development while at Leland Interactive Media, around 1992 or 1993. It wasn't until about a year later when I started working at Sculptured Software that I began coding games for the SNES, which used the Sculptured Software hardware.

What made you decide to tackle the 'impossible' conversion of *Doom*?
While working at Sculptured Software, a few of their programmers were invited to visit Nintendo Of America's headquarters for a special Nintendo Developers Conference. At the conference, we had the opportunity to meet a number of well-known developers, designers, and engineers from Nintendo. The highlight of the trip was being shown a preview of *Star Fox* running on the Super FX chip and I just knew that a future project of mine would be to create a version of *Doom* for the SNES.

What was working with the Super FX chip like?
The Super FX is one of my favourite architectures – it's compact and efficient and allows great flexibility when programming. I really enjoy the ultra-low-level nature of Super FX programming and squeezing some extra clock cycles out of a piece of code is a rewarding experience.

Did you get any help or feedback from id Software?
The SNES version used a custom engine that wasn't based on the id Software code, so help was limited to suggestions that made the SNES version closer to the PC game. The one addition that I made compared to the PC version was the rotating automap, and id allowed us to keep that.

What were the biggest compromises or cuts you had to make?
The two biggest differences were the lack of enemy rotations and the reduced number of levels, although the SNES version has more levels than many of the other ports. Those differences were due to the limited space available in the cartridge – 2 megabytes. I built a custom development system (Assembler, Linker, Debugger, etc.) which used a modified (ie hacked apart) *Star Fox* cartridge to provide the CPU and communication to the Amiga-based toolchain – via a serial-based interface plugged into both joystick ports on the SNES; there were no official development systems available at the time. Support for Nintendo's official hardware development system for the GSU2A was added later in development because no games had been released at that point which could be 'modified' for use (*Star Fox* used the original GSU which ran at half the clock rate of the GSU2A and had less memory among other hardware changes and enhancements.) At the end of the *Doom*/SNES development work, I was able to get the official Intelligent Systems SNES emulator which supported the Super FX 2 hardware.

FIVE TO PLAY

Randal highlights some of his proudest achievements

C64 EMULATOR AMIGA

■ "Because it was my first emulator, and because it showed me how important it is to preserve older titles for future generations." The familiar blue startup screen allows users to type in BASIC programs and run transferred C64 games on a stock Amiga 500.

DRAGON'S LAIR AMIGA

■ "Because I absolutely loved the game and was thrilled to be able to bring it to a larger audience." The later combination of the original and *Escape From Singe's Castle* running from the hard drive provides a huge and seamless adventure for Dirk The Daring.

DOOM SNES

■ "Because the experience of working on an 'impossible port' was invaluable." Details such as the automap impress, it retains many bonuses, and X-Band users could play deathmatches – provided they had two TVs, two machines, two modems and two *Doom* cartridges.

BLEEM! PC

■ "Because of the groundbreaking emulation technologies and the important legal precedents that were set by the court battles." While we may be used to console games (eventually) appearing on PC now, back then it was a major breakthrough for PC gamers.

QUAKE GAME BOY ADVANCE

■ Randal's final choice was *Paperback Filer 64* "because it was my first large-scale commercial success. It was a complicated program that taught me a lot about developing software for a large audience". We substituted this impressive FPS prototype.

ACCLAIMED SCULPTORS

The story of Sculptured Software

■ Randal spent several years working for Sculptured Software on NES and SNES games. The developer had originally been formed in Salt Lake City, Utah, back in 1984. The founders were George Metos, Peter Adams and Bryan Brandenburg, with the company incorporated as Sculptured Software Inc in July 1985. Among its earliest work, several titles would be published by budget label Mastertronic across C64, Atari 8-bit and DOS. These included *Ninja* and *Street Surfer*, to which Mastertronic added music; *Ninja* had a tune by Rob Hubbard on the C64, while the David Whittaker music in *Street Surfer* slowed down and speeded up with the actions of the skateboarder (and there was an environmental message, with the player picking up empty bottles to recycle). *Los Angeles SWAT* proved controversial, as it tasked the player with being a police officer shooting rioters in the city.

The Nineties would be Sculptured's best era as it moved onto Nintendo platforms. The likes of *Mortal Kombat* and the *Super Star Wars* trilogy proved the company's mastery of the SNES hardware, to which Randal added his clever conversion of *Doom*. Another Super FX title emerged from the company entitled *Dirt Trax FX* – helped by Randal's experience with the add-on chip, for which he is thanked in the game's credits. Sculptured's success attracted the attention of publishers Acclaim, who took over the studio in 1995 – along with Probe and Iguana Entertainment. Sculptured was sometimes referred to as Acclaim West but would continue to be a separate studio until 1999. Then it became Acclaim Studios Salt Lake City, developing the PS2 and Xbox title *Legends Of Wrestling*; this featured classic wrestlers such as Hulk Hogan, Bret 'The Hitman' Hart and the Road Warriors. While working on the sequel (whose European version exclusively included British wrestlers Big Daddy, Giant Haystacks, Kendo Nagasaki and Mick McManus) the Salt Lake City office was closed, and people switched to Acclaim's Austin studio (formerly home to Iguana). Acclaim would file for bankruptcy in 2004, bringing the story of Sculptured Software to a close.

» [SNES] While it received mixed reviews, *Dirt Trax FX* provides multiple tricky courses to ride.

» [NES] You will see a lot of this screen in *Home Alone*.

» [NES] *Wayne Gretzky's Hockey* features the Jumbotron screen, showing animations of the referee.

Did you put any Easter eggs or cheats of your own into *Doom*?
The only Easter egg was a note at the bottom of the Episode 1 Sky background that is only visible when using cheats to clip through the walls. There wasn't enough space free in the cartridge to add any cheat codes, so there were none.

Do you remember the X-Band modem for online play with the SNES and Mega Drive?
I wanted to add multiplayer support while developing *Doom* SNES but ran out of time, so I made sure to write the code in such a way as to make it easier for me to add the support after the game had launched. I spent the first few months after launch working with Catapult Entertainment and Richard Kiss to add the X-Band modem support.

What inspired the creation of Bleem!?
Similar to what I had seen between the Commodore 64 and Amiga, the PlayStation had a large library of high-quality titles that weren't available on the PC. I believed that an emulator for playing PS1 games on the PC would expand the PC games market and increase sales of PS1 titles.

How did the legal proceedings affect you?
Bleem! ended up spending a lot of money on the legal case and ultimately, I'm very proud of what we accomplished. Bleem! and Bleemcast! set important legal precedents regarding fair use, copyright infringement, and emulation.

How easy was it developing for Dreamcast and adding the enhancements to PS1 games played through Bleemcast!?
During the development of Bleemcast! Sega provided complete low-level documentation and information about the Dreamcast system and all of its peripherals. In order to avoid further legal issues, I was not allowed to use the Sega libraries and had to rewrite everything from scratch. The enhancements and improvements were definitely a nice feature that made the PS1 games much closer to PS2 quality. The choice of games (*Gran Turismo*, *Metal Gear Solid*, *Tekken 3*) was fairly simple: titles had to look great when enhanced by the Dreamcast's more powerful hardware and there had to be a wide audience for the games to ensure enough sales of each disc would be possible.

What is the story of Microsoft asking for a version of Bleem! for its PC in a console?
Bleem! was approached by someone at Microsoft who asked for a custom version of our software that didn't display any titles or other information and booted directly into a game. This version was apparently shown to Bill Gates to demonstrate how it was possible to make a PC into a game console and he was convinced enough to authorise the Xbox project.

How did you end up working at Microsoft, and what were you involved in?
I was approached by two different groups at Microsoft and ultimately decided to work on the Xbox Developer Tools team. I started out on the software development tools for Xbox games (called the XDK for Xbox Development Kit), then worked on the Kinect Xbox 360 accessory, the Xbox One Controller and finally on the Microsoft Band and Band 2.

Did your experiences with *Doom* help you when attempting to port *Quake* to the Game Boy Advance?
Similar to *Doom*, my version of *Quake* on the GBA was not based on the id Software code. My experience developing large-scale complex low-level code was useful because *Quake* is much more complicated than *Doom*.

Are you still developing your Android FPS, *Cyboid* (see the Android Attacks panel)?
Although my free time is pretty limited these days, I do continue to tinker and improve *Cyboid!* I wrote some tools which can import and process a *Quake II* level into my engine's format, so adding new content is a straightforward process and most of the time is spent looking for great levels and monsters to add.

What was it like working with Limited Run Games' Carbon Engine?
I enjoy working on Carbon because it's an exciting combination of retro emulation with

» [SNES] The familiar *Doom* automap rotated on the SNES, helping to keep you oriented.

> "The Super FX is one of my favourite architectures – it's compact and efficient"
> Randal Linden

modern technology advances. Features like Rewind and Save States make a huge difference when playing older titles on new consoles. For example, my latest work is on *Rocket Knight Adventures: Re-Sparked* and we added a Boss Rush mode which lets the gamer play each level boss one after another. It's a lot of fun, although it's pretty difficult!

Do you pass on your knowledge to other coders and teams frequently?
I always try to 'pay it forward' by offering my expertise and insight whenever I can. I strongly believe that all computer programmers 'stand on the shoulders of giants that came before them' and I'm just doing my part to help others along the way.

Do you think modern games would benefit from more optimisation and compression?
Definitely. The size of a single modern graphics texture can be larger than many entire programs from just a few decades ago. There are always trade-offs when considering whether to spend the extra time to add compression and optimisation to a project, but I like to think of these tasks as part of the required work because they have a 'multiplier effect'; any amount of data or clock cycles saved is multiplied by the number of people who benefit from that improvement, and when working on projects for a large audience, the cumulative impact can be significant.

Did you ever patent a coding trick/technique?
I was awarded four patents as a sole inventor for the technologies and techniques I developed for Bleem! and Bleemcast! In particular, a dynamic optimising recompiler, which is the part that does the 'translation' of code between systems. I also designed and implemented the custom physical media copy protection as well as the software-based DRM.

During lockdown in 2020, you shared the *Doom* SNES source code. What was the reason for this?
I felt it was important for programmers and hobbyists to be able to examine and play with the complete code for a well-known shipping title on a popular game console. There was no existing sample code or demos that documented how to use the Super FX in a highly optimised way, and I wanted to pass on the knowledge I had gained.

You also shared the *Quake* prototype for Game Boy Advance, do you think it could be finished?
Absolutely! I developed the prototype using a custom hardware interface and software that only works on Windows 95/98, so I'll need to rebuild a very old machine in order to complete the project!

What has been your favourite hardware to work on over the years?
By far my favourite has been the Amiga – it was a machine way ahead of its time and I enjoyed working on it. ✱

ANDROID ATTACKS

Randal discusses the Cyboid project

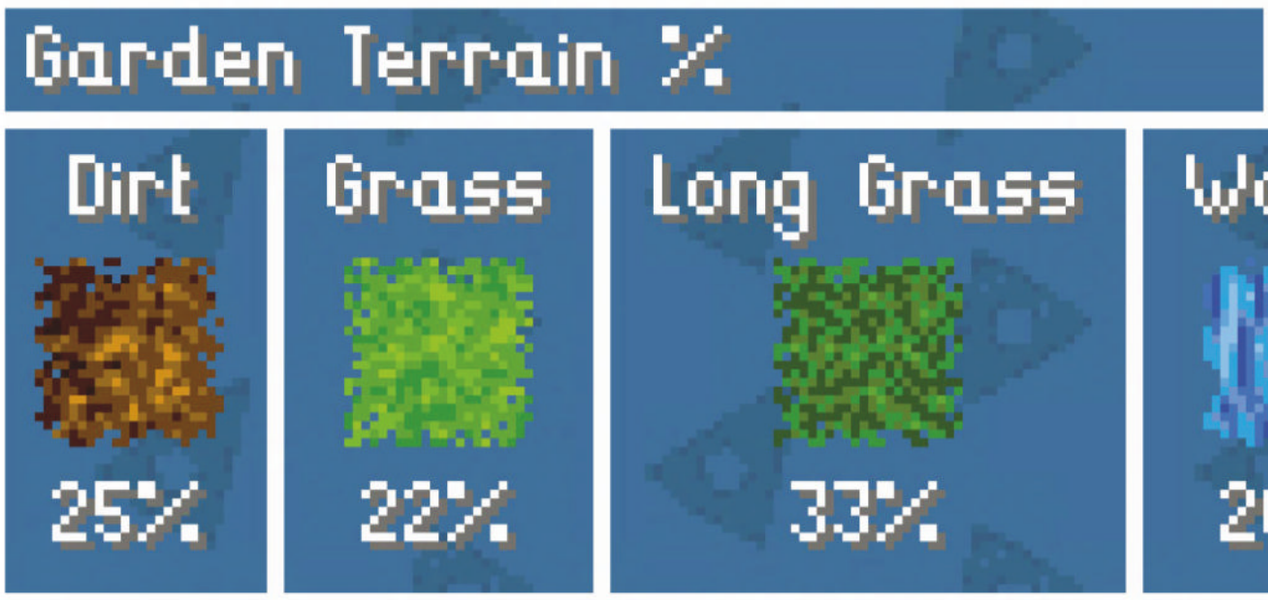
■ "Are you curious to see what's possible in only 18 Megabytes?" asks Randal. "*Cyboid* features one and two-player split-screen gaming and eight-player online multiplayer across a variety of play modes. There's VR support, in-app purchasing, achievements and leaderboards, and it runs on multiple platforms from Google and Amazon.

"The game is written in ARM assembly, native C/C++ and Java and the entire package (code, data, graphics, sound, and music) is under 18MB (yes, 18 megabytes!) The custom engines have all been highly optimised to support the widest range of devices possible, including lower-powered hardware or older devices running Jellybean."

Randal was concerned about piracy. "I designed and implemented the DRM protection which remains uncracked with over 250K users across Android and Amazon platforms." But he's not an Android fan. "In my experience, working on Android was the most cumbersome and complicated of all the platforms I've used. The open nature of the ecosystem makes each target hardware somewhat different, and it requires a lot of extra code to make things work properly across the huge variety of systems."

» [Game Boy Advance] Extra weapons and angled floors were all part of the *Quake* prototype.

» [PC] Randal's work on *Rocket Knight Adventures: Re-Sparked* includes the new Boss Rush mode.



Viva Piñata: Pocket Paradise

COMING FULL CIRCLE

RETROREVIVAL

» NINTENDO DS » 2008 » RARE

Although it launched on Microsoft's Xbox 360, *Viva Piñata* was originally envisioned for a far more humble system. Rare's garden-tending simulator was earmarked for Microsoft's Pocket PC, but it was eventually moved over to the original Xbox before releasing on the Xbox 360.

Viva Piñata's portable roots were never forgotten though and in 2008, a reimagined version of the game, *Pocket Paradise*, debuted on Nintendo's popular DS handheld. While it shares many elements with the original Xbox 360 game, it does make several distinct changes so that it's more suited for portable play. For starters, the stylus is used heavily throughout *Pocket Paradise* meaning it's far easier to tend to various aspects of your garden.

Other changes include how you collect fertiliser and Romance Sweets (the former is created from teaming Tafflys up with different fruits, while the latter is earned by completing *Viva Piñata* Central challenges). The second screen adds lots of useful information about your garden and can even be switched to the bottom screen so you can use the stylus to flick through the comprehensive Piñata encyclopaedia that has been included.

Equally impressive is how Rare has captured the graphical splendour found in the original game. Granted the DS can't hope to compete with the stunning visuals of the Xbox 360 version, but all the included characters and Piñatas are instantly recognisable and it feels just as much of a living, breathing ecosystem as the original game did. Admittedly the courtship dances don't look quite as nice due to the footage used, but they're still full of humour and brilliantly match David Wise's excellent tunes.

As you may have guessed, I'm a huge fan of *Pocket Paradise* and a big fan of the *Viva Piñata* series in general (with the exception of *Party Animals*). The original game and its sequel were exactly what I'd expect from a Rare game and it's a crying shame that *Pocket Paradise* remains the last game in the short-lived series.

Still, it's a terrific game to sign off with and makes me wish that Rare had made more games for Nintendo's portable system. Now, how about a Switch update? *

» This month we review a brace of shmups for PC, go for a dive in the depths of Endless Ocean Luminous and find out if Nintendo's remake of Paper Mario: The Thousand-Year Door is worth owning

How To Play:
Use the Shot and Helper buttons to destroy enemies.
Getting hit by enemy fire or colliding with airborne enemies will destroy your plane.
If your plane is destroyed you lose a life and all upgrades.
TOP 96420
TOP 96420
2UP 0
Extra Life
Power up (up to 3 times)
Helper
6 Helpers join you when called up.
Helpers fire continously and crash into enemies when destroyed.
Press helper button again to send all helpers into attack for extra damage.
Double tap Helper Button for bomb.
PUSH START BUTTON

» [PC] There's a weird audio issue in *Twin Hawk*, but it didn't ruin our enjoyment of the game.

Toaplan Shoot'em Up Collection Vol 4

HAS BITWAVE SAVED THE BEST TILL LAST?

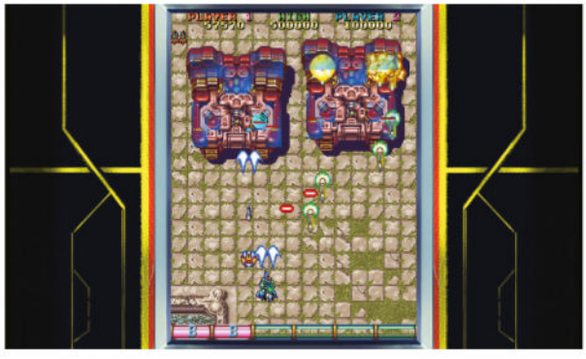
INFORMATION

- **RELEASED:** OUT NOW
- **PRICE:** £16.60, £6.69 EACH
- **PUBLISHER:** BITWAVE GAMES
- **DEVELOPER:** BITWAVE GAMES, TOAPLAN
- **BUY IT FROM:** STEAMPOWERED.COM, GOG.COM

Fans of Toaplan have been well served in recent years. Many of its classic shmups have snuck onto Blaze's Evercade system, cropped up on the odd mini console and have even been the subject of various M2 projects. It has been no different on PC where Bitwave Games has been delivering impressive quartets of Toaplan shmups and now we're at the end of the line. Worry not though, for despite a few little niggles, the developer has gone out with a bang.

Before we look into the various tweaks and enhancements that Bitwave has made to this latest selection of shmups, it's probably best to look at the game's themselves, as they represent some of the deeper cuts of Toaplan's rich legacy and may not be familiar to you.

Our first game is actually two games in one as *Grind Stormer* also includes the original *V-V* which was first released in Japan before being updated for Western audiences. It's essentially a spiritual successor to *Slap Fight* and shares a similar weapon selection system. It's also incredibly hard, which might be why it was retooled for the West. *Grind Stormer* dispenses with *V-V*'s upgrade system and adds bombs, as well as speed ups and speed downs. We actually prefer the rawness of *V-V*, but *Grind Stormer* is better balanced overall. *Twin Hawk* is up next and



» [PC] Here you can see useful guidelines like hit boxes and how much energy remaining enemies have.

BRIEF HISTORY

» Based in Gothenberg, Sweden, Bitwave Games is best known for adapting Toaplan's many shmups to PC. Each game is packed with numerous extras, including regional variations and tweaks to change difficulty, and they all do a great job of highlighting the work of one of the most important shmup developers of all time.

» [PC] All four games include a Tate Mode, which is great news, as you've far more real estate to play with.

✱PICKS OF THE MONTH

DARRAN

Endless Ocean Luminous

It's certainly a step back after the delightful *Endless Ocean 2*, but I've still sunk an unhealthy amount of time into this charming underwater collectathon.

NICK

Paper Mario: The Thousand-Year Door

I've been enjoying the chance to finally tackle this adventure, as I never managed to own the GameCube original.

» [PC] It's nice that *V-V* is included, even if it is an incredibly challenging game.

» [PC] We quite like the scanline filter Bitwave uses, which is good as it can't be tweaked.

A FORMIDABLE ARSENAL

▼ TOAPLAN'S SHMUP LEGACY IS IMPRESSIVE

If you like the look of Bitwave's latest collection and want to explore Toaplan's back catalogue further, the developer has released three other collections. *Volume 1* features *Zero Wing*, *Twin Cobra*, *Out Zone* and *Truxton*, *Volume 2* includes *Slap Fight*, *Flying Shark*, *Hellfire* and *Fire Shark*, while *Volume 3* features *Fixeight*, *Batsugun*, *Tiger Heli* and *Vimena*. All games can be purchased separately, or you can get all 16 games for £57.76. They all feature superb emulation and the same dazzling array of options as this latest collection.

it's a military-themed shooter in the style of Toaplan's *Flying Shark*. The mechanic that makes it stand out is the versatility of its smart bomb which can either be used to clear a large portion of the screen or summon a squadron of fighters that will lay down extra fire and suicide bomb enemies when they're finally shot down.

Truxton II is perhaps the least flamboyant of the included games as it offers little mechanically over its popular predecessor. Having said that, it's incredibly polished, looks absolutely fantastic and features some excellent bullet patterns to weave through, along with challenging boss encounters. The final game is *Dogyuun* and it's another shmup that will have flown under the radar of many. It's also highly innovative, allowing both players to combine their ships to greatly enhance firepower – although it's at the risk of both ships getting destroyed by a single bullet.

Overall Bitwave has chosen a strong selection of games to finish off its series and while none of the titles will be particularly well known outside of shmup circles they all range from good to fantastic and will take an age to master.

It's a good job then that Bitwave's ports offer plenty of options to help make that task a little easier. While there's nothing here as enhanced as what you'll find in M2's *ShotTriggers* series, Bitwave's tweaks are well beyond what you'd typically expect to see. And in many cases they're needed, because these are some of the toughest games in Toaplan's considerable arsenal.

A Practice Mode exists for each game and it's surprisingly comprehensive, allowing you to tweak various parameters so you can concentrate on the areas that are causing you issues. There's a Rewind option (although this will obviously impact scoring on each game's online leaderboards) and you can also show or change the size of your ship's hitbox and even choose what weapon you start with.

There are numerous save and load states and it's also possible to record your runs so you can examine the areas that are causing you trouble. You can change numerous aspects of the video and audio, pick a variety of different borders (including a handy tutorial display), change the difficulty level, the region the game was released in, the speed the game runs at and whether you'd like scanlines.

It all adds up to an extremely comprehensive package and a fitting ending to what's been a genuinely great collection of classic arcade games. The only issue we noticed is that two of the games (*Twin Hawk* and *Grind Stormer*) featured a weird audio background hiss that no amount of tweaking with the sound could eliminate. Other than that this is another great collection from Bitwave.

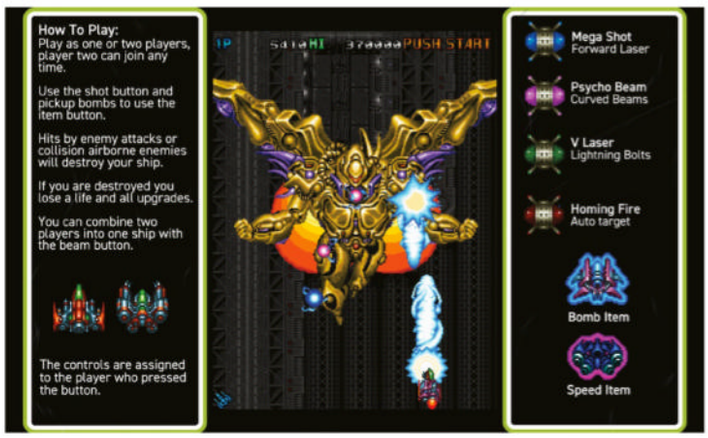
In a nutshell

Another solid quartet of entertaining shooters that not only highlights the considerable strength of Toaplan's back catalogue but also Bitwave's tremendous porting efforts.

» Score **90%**

How To Play:
Use the Shot and Bomb buttons to destroy enemies.
Getting hit by enemy fire or colliding with airborne enemies will destroy your ship.
If your ship is destroyed you lose a life and all upgrades.
Collect Pick-Ups and Bombs from skull-faced boxes.
Speed-Up (Up to 5 times)
Bomb Pick-Up
Shot
Laser
Napalm
Pipiru are hiding in objects on the ground.
Shoot Pipiru for items.

» [PC] *Truxton II* doesn't have many bells and whistles, but it's a worthy sequel nonetheless.


How To Play:
Play as one or two players, player two can join any time.
Use the shot button and pickup bombs to use the item button.
Hits by enemy attacks or collision airborne enemies will destroy your ship.
If you are destroyed you lose a life and all upgrades.
You can combine two players into one ship with the beam button.
The controls are assigned to the player who pressed the button.
Mega Shot Forward Laser
Psycho Beam Curved Beams
V Laser Lightning Bolts
Homing Fire Auto target
Bomb Item
Speed Item

» [PC] We've really enjoyed our time with *Dogyuun* and it's quite the obscurity to boot.

PICK OF THE MONTH

Paper Mario: The Thousand-Year Door

» **System:** Switch (tested) » **Buy it for:** £49.99 » **Buy it from:** Online, retail

The latest entry in the *Paper Mario* series is a faithful remake of the GameCube game of the same name, which was the second entry in the *Paper Mario* series of RPGs. The story begins with Peach finding a treasure map, only to find herself kidnapped by the X-Nauts, who, like Mario and Bowser, are in pursuit of the Crystal Stars that will lead to the treasure. You don't have to spend too long with the remake to see why the original version is so well regarded, as the writing is very amusing and plays with the established *Mario* world well.

The game mechanics were rather different to the genre standard at the time, and they still prove to be engaging – attacks are chosen from a menu but each require active participation to have full effect, and well-timed button presses can reduce incoming damage too. The bulk of the gameplay remains unchanged, but there are some new additions that help to ease some of the minor stresses of old. Most notably, the Battle Master allows you to train so you can perform more effective attacks, while more helpful hints are available to ensure that you're never lost in the game.

The presentation has been updated, and mostly improved – as well as the standard higher resolution, there's an arranged soundtrack and you'll notice a variety of extra graphical effects. It's not a straight upgrade though, as the game runs at 30fps rather than the 60fps of the original – it doesn't degrade the gameplay, but it's noticeable all the same.

Do the upgrades justify a relatively high price point for what is, at its core, a 20-year-old game? If you're lucky enough to own the GameCube game, absolutely not – it's hardly the most radical of overhauls. But if you haven't played it before, it's worth remembering that you'll be very lucky to find the GameCube game at this price.

» Score **82%**

» [Switch] Battle mechanics often involve small challenges of precision and timing.

» [Switch] Familiar items like mushrooms function just as you'd expect them to in battle.

Endless Ocean Luminous

» **System:** Switch » **Buy it for:** £39.99
» **Buy it from:** Online, retail

The third game in Arika's *Endless Ocean* series is an odd one. Opting for procedurally generated oceans to explore there's a clear emphasis on online play. Teaming up with a group of other divers means you'll uncover the secrets of each area far quicker than trying on your own and it also lets you fully enjoy the game's UMLs (Unidentified Marine Life). The decision to hide the story behind constant grinding is rather odd, but there's something strangely compelling about seeking out the many creatures that inhabit the game's depths. *Luminous* relies on its endless loop of seeking out creatures and uncovering salvage and offers very little beyond that. And yet, we can't stop playing it.

DARRAN JONES

» Score **69%**

Rainbow Cotton

» **System:** Switch (tested), PC, PS4, PS5, Xbox One, Xbox Series S/X » **Buy it for:** Online
» **Buy it for:** £17.99

It's a brave move to re-release a game that wasn't very good in the first place. Kudos then to developer United Games for attempting to polish what was a very rough Dreamcast shmup. Highlights include far better control over your targeting reticule so it doesn't get obscured by Cotton like in the Dreamcast version, energy bars for bosses, cutscenes with English subtitles and a silky-smooth 60fps (it was 30fps originally). Movement of Cotton feels very sluggish though and it's still very hard to judge the distance between enemies and incoming projectiles. Yes the game is a decent improvement over the Dreamcast original, but there are far better shmups out there.

DARRAN JONES

» Score **60%**

The Epyx Collection: Handheld

» **System:** Switch
» **Buy it for:** £11.99 » **Buy it from:** Online

The latest offering from Pixel Games UK is a solid collection of Lynx classics. The highlights are *California Games*, *Blue Lightning*, *ElectroCop* and *Todd's Adventure In Slime World*. There are also two shmups, *Zarlor Mercenary* and *Gates Of Zendocon*. The former suffers from popcorn enemies that take way too many hits to kill, while the latter is a tepid shooter that never impressed us on release. You can't customise controls, but there are save and load states and there's a lovely LCD filter we've been using. It's very barebones in terms of its presentation, but the four main games and extremely cheap price tag is enough to make this worth a purchase.

DARRAN JONES

» Score **67%**

RELIVE THE GLORY DAYS OF HANDHELD SUPREMACY

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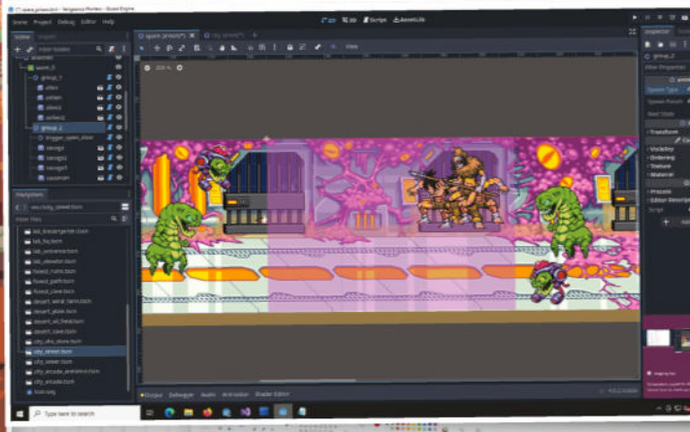
THE HOMEBREWER'S KIT

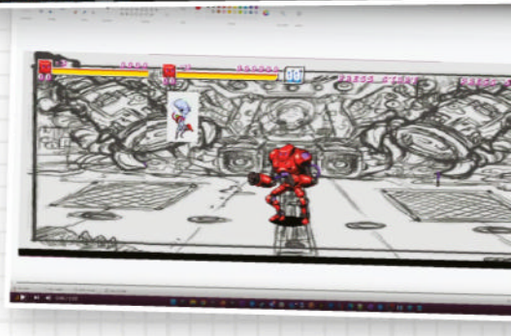
<YOUR MONTHLY GUIDE TO EVERYTHING HAPPENING IN THE HOMEBREW SCENE/>

<!--- [NEO GEO] THE HIGH-KICKING CANDY CAN ALSO PERFORM A DYNAMIC SOMERSAULT MOVE. --->

<!--- ENEMY PLACEMENT USING THE GODOT ENGINE. --->



<!--- A MIX OF CONCEPT ART FROM MS PAINT AND SPRITES FROM ASEPRITE. --->



<INTRO> TWO AMIGA GAMES WE FEATURED BEFORE ARE IN OUR THOUGHTS THIS MONTH. THE AMAZING CECCONOID GETS REVIEWED, AND THE BRILLIANT ROGUECRAFT JUST MISSED OUT – THAT WILL BE IN THE NEXT ISSUE. MEANWHILE, WE HAVE A SUPERB NEO GEO GAME FOR OUR MAIN FEATURE, A GREAT PICO-8 REMAKE TO LOOK FORWARD TO, AND A CHAT WITH A C64 PROGRAMMER WHO IS REVIVING SOME FAMILIAR CHARACTERS. 2024 IS SHAPING UP TO BE ANOTHER BRILLIANT YEAR FOR HOMEBREW. </INTRO>

<MAIN HEADER>

VENGEANCE AND VICTORY

<INTRO> NALUA STUDIOS IS PRODUCING A TOP-QUALITY NEO GEO BEAT-'EM-UP, AS COMBAT DESIGNER MICHAEL MONAGHAN REVEALS MORE ABOUT VENGEANCE HUNTERS </INTRO>

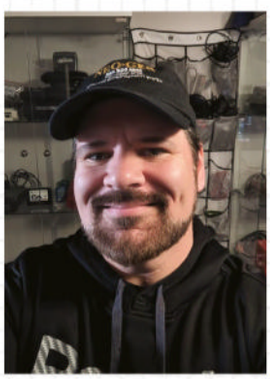
<BODY> **"I love the Neo Geo," says Michael Monaghan, who joined the *Vengeance Hunters* project in August 2022.** "We've taken inspiration from all over the place. Originally, the gameplay was inspired by *Cadillacs And Dinosaurs* – basic movement, combat mechanics and gunplay (we no longer have those kinds of guns). I would describe our gameplay more like a beat-'em-up that goes for *Marvel Vs Capcom* combos. Hit, hit, hit into a launcher that allows you even more options in the air or ground. We also have a bit of *Aliens* arcade in there with the new power-up/gun system."

Vengeance Hunters is written in C, with the artists using Aseprite. "A PNG or GIF is created, and a conversion tool is used to convert to tiles – assuming we didn't break any hardware limitations," explains Michael. "Colour palette restrictions are the biggest offender here." Sound is courtesy of Pentadrangle (music) and Bibiki (sound FX), with voice samples compressed to fit. "Everyone remembers the Neo Geo being an absolute beast… but it's fickle," Michael explains, "and we have sometimes had to get very creative to get things done or simply discard ideas entirely that the Neo Geo can't handle."

Michael says *Vengeance Hunters* will offer plenty of variety thanks to a simultaneous two-player mode, minigames and three playable characters.

"One of my big issues with the beat-'em-up genre, especially ones from the era, is that a lot of characters were extremely simple with few options and played too much alike. One way to deal with that was to make each character have a unique move that we call their Signature Move.

"Golem, our grappler, can do a variety of throws on the ground and in the air. Candy, our evasive speed demon, has a cartwheel that gives her invulnerability frames to avoid incoming damage (she has lower HP to help balance her). She flows around the screen



<!--- MICHAEL MONAGHAN IS THE COMBAT DESIGNER OF VENGEANCE HUNTERS. --->

RECENT RUMBLES

THE SIMPSONS
NES

<Mario Azevedo's mock-ups show how Konami's arcade game could appear on the NES, including this Krustyland view – please finish it! />

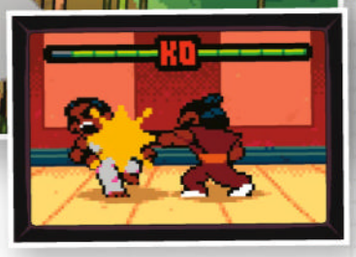
ANGELS
ZX Spectrum

<Zoysa Entertainment has combined twin alien females, strange historic paintings, and an Earth-spinning plot with huge sprites and smooth scrolling. />

NEW GAMES NEEDED

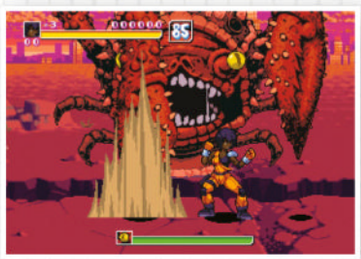
Our new email address is waiting for all your homebrew news, previews and more: **retrogamer@futurenet.com**

<!--- [NEO GEO] THE ROBOT GOLEM TAKES ON LEVEL 1'S SWAMP FULL OF ZOMBIES. --->



<!--- [NEO GEO] BEFORE TAKING ON THE ARCADE LEVEL'S BOSS, DEFEAT HIM IN THE MINIGAME FINAL DRAGON. --->

<!--- [NEO GEO] THE SCOOTER MINIGAME, WHERE YOU MUST COLLECT GOLD BARS AND AVOID HAZARDS. --->



<!--- [NEO GEO] ATTACK THE GIANT ENEMY CRAB! --->

easily due to her Signature. Loony is our ranged specialist as his Signature Move is the Fist Missile. He fires a rocket that will only do light damage/basic interrupts on standing enemies, but massive damage for airborne enemies, or knock downed enemies up into the air. These Signature Moves allowed us to keep inputs extremely similar between the playable characters regarding combos, but changed how each plays in the field enormously."

Vengeance Hunters will also be on modern formats with Switch, PS4, and PS5 confirmed. "Gabor, our programmer, has a build system that kicks out all the builds we want for the supported platforms," says Michael. "Alex did a wonderful job talking with Sony and Nintendo to secure dev partnership status and we are still in talks with Microsoft and Steam at the time of writing." As for the next project, Michael says, "I would love to stick to the Neo Geo and make an absolutely banger mascot-type platformer." Watch this space. </BODY>

<INTRO> PROTOTYPES AND RELEASES TO SHAKE YOUR FISTS AT </INTRO>

DEVIL'S TEMPLE

Amiga

<Earning a Sizzler in **RG** 241, McGeezer cleverly combined two Irem classics – *Kung-Fu Master* and *Vigilante* – into a huge ten-level extravaganza. />

FINAL FIGHT ENHANCED

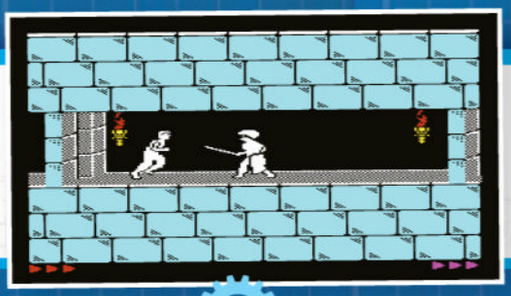
Amiga

<The original port was problematic, so this update adds improved graphics and enemy AI and made Maki from *Final Fight 2* playable. />

FINAL FIGHT ULTIMATE

Mega Drive

<Mauro Xavier and the team are still hard at work on this conversion, with the promise of simultaneous two-player action. We can't wait to play it. />



NEWS BYTES

<INTRO> NOW ORGANISED BY FORMAT, HERE ARE THE LATEST NEWS BYTES TO ENJOY </INTRO>

<**Amstrad CPC:** Either type in *Pirka* (by Crazy Piri) from the PDF – or load the free DSK image. More at bit.ly/pirka-cpc />

<**Aquarius:** Roy Templeman's *Paqu Deluxe* (16K) will get a physical cassette soon (containing a bonus game). Order it at bit.ly/paqu-aquarius />

<**Atari 2600:** Champ Games release *Tutankham Arcade* in September. Play the free demo at champ.games/downloads />

<**C64:** Carleton Handley's *Spinning Image* comes with 50 levels. Name your price at bit.ly/spinning-image />

<**Game Boy:** GBStudio celebrated its fifth anniversary with an interactive history lesson. Discover it at bit.ly/gbstudio-5th
Also, GnomeKIng Games released *The Train Part 2* digitally for £5, after the physical Kickstarter. Buy it from bit.ly/thetrain2 />

<**Master System:** The latest SMS Power coding competition produced great new titles. You can find them at bit.ly/smspower2024 />

<**MSX:** Fishing game *Trucho* resembles classic Konami games. The digital edition is €5/€8 at bit.ly/trucho-msx and physical cartridges (€35) can be ordered via msxcartridgeshop.com />

<**NES:** The Nexxt graphic studio – based on NES Screen Tool – is free but tips are welcome. Support it at bit.ly/nexxt-nes />

<**PC:** Sk1ds is developing *Turbo Outrun Reimagined.* You can play a demo of the game over at bit.ly/outrun-clone />

<**PICO-8:** Check out Vicente Romero's *GOAT* (*Goat On A Tower*). Give it a try at bit.ly/goat-pico8 />

<**Various:** Inufuto's *AntiAir* (a twist on *Space Invaders*) plays on 50+ different machines. Download your version at bit.ly/antiair-various />

<**VIC-20:** *Prince Of Persia* (top) leaps onto another format (PAL only, +35K expansion) thanks to Pedro Bermejo. Witness this impressive conversion at bit.ly/persia-vic20 />

<**ZX Spectrum:** Luca Bordoni's *The 8-Bit Wars* has been released digitally, in tribute to the late Andy Remic. Name your price and order it from bit.ly/8bitwars-spectrum />

Don't forget to follow us online for all the latest retro updates

RetroGamerUK @RetroGamer_Mag retrogamer@futurenet.com

CHAMPION CODER

ROBERT WILSON

<INTRO> FIND OUT WHY ROBERT IS REVIVING DESIGNS HE MADE IN THE EIGHTIES AND REVISITING SOME CLASSIC CHARACTERS </INTRO>

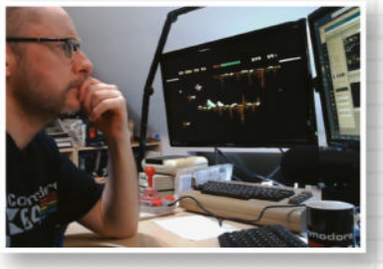
<INFO FROM: OLDHAM, ENGLAND WEBSITE: RWXDESIGNS.CO.UK FORMAT: C64 PREVIOUS GAME: QUASIMODO'S CHRISTMAS CAPER WORKING ON: SYSTEM X, TIKI, QUASIMODO'S JUNGLE JEOPARDY />

HOW HAS SYSTEM X EVOLVED FROM YOUR ORIGINAL 1989 DESIGNS?

<The game itself is completely rewritten from scratch. I've updated the drone sprite and added an overlay. I've improved the jetpack animation and added a lot of other frames; he can shoot diagonally if required. I have four main themes: a rocky *Planetoid*-like level, an organic level, an ice-themed world and a very colourful crystalline world. There may be a volcanic world, but the exact number of themed levels has not been finalised. I don't necessarily want big end-of-level bosses. I also think that aliens will be unique to each level. There will be some parallax in the background, plus music and sound in-game. The game design is progressing and the graphics I'm creating today are superior to what I was doing back in 1989. />

THE MAIN SPRITE FROM TIKI LOOKS RATHER FAMILIAR...

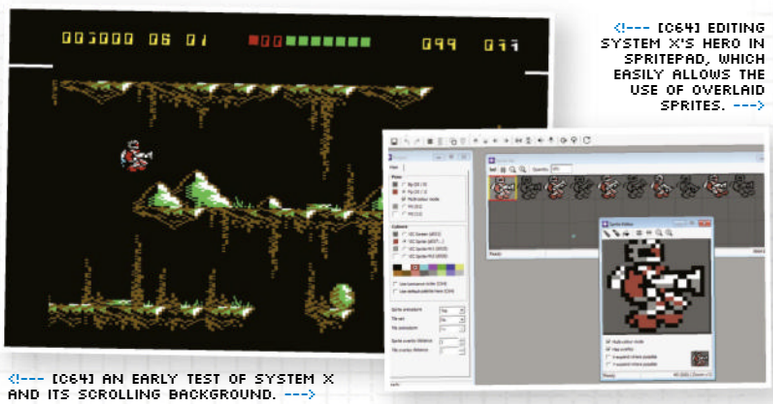
<Tiki is only based on elements from *The NewZealand Story* – if there's any problem from Taito, then there's a backup plan to change the sprites and the name. It will be a single-screen platform affair, with some scrolling bonus stages. Tiki will fire arrows and throw bombs like the original. The exact number of levels is still not decided and the timescale for release keeps moving as I switch between projects. />



<!--- ROBERT WILSON, WITH SYSTEM X ON ONE SCREEN AND CHARPAD ON THE OTHER. --->

WHAT CAN YOU TELL US ABOUT YOUR NEW QUASIMODO GAME?

<I liked the idea of reworking *Hunchback*. I thought I would put him in a Christmas outfit – and *Quasimodo's Christmas Caper* was born, my first-ever C64 release. I decided on an Indiana Jones-style outfit for *Jungle Jeopardy*, a reworking of *Pitfall!*. I put him in a goth-type outfit for *Halloween Horror*, a mix between rock star Alice Cooper and Professor Snape from *Harry Potter*. The options are endless really. *Hunchback Redux* will be the big game, the biggest I've ever written. It will be good to see him dodging arrows and cannonballs on the battlements trying to rescue Esmeralda. />



<!--- [C64] EDITING SYSTEM X'S HERO IN SPRITEPAD, WHICH EASILY ALLOWS THE USE OF OVERLAID SPRITES. --->

<!--- [C64] AN EARLY TEST OF SYSTEM X AND ITS SCROLLING BACKGROUND. --->

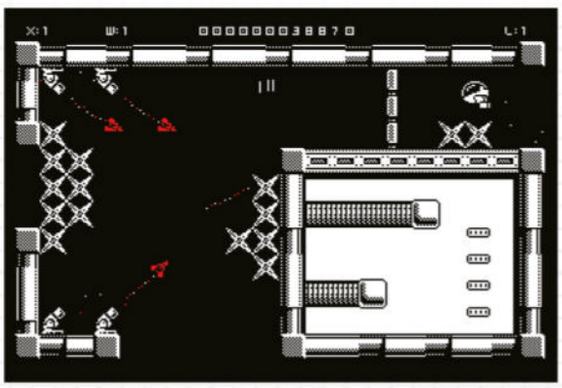
DATA BURST

CECCONOID

<INFO FORMAT: ALL AMIGA MODELS (MINIMUM 1MB MEMORY)
CREDITS: HOFFMAN FOR THALAMUS DIGITAL
PRICE: DIGITAL TBC / PHYSICAL CURRENTLY SOLD OUT
WEB: BIT.LY/CECCONOID-ORDER />

<BODY> **The starship Equinox is under attack from Stormlord and his robotic Exolons, leaving you and your Samurai-1 fighter to defend it.** Gareth Noyce's PC original was a homage to *Cybernoid*'s flick-screen gameplay with influences from twin-stick shooters, all displayed in gorgeous 1-bit graphics (with splashes of red). After Ste Pickford's brilliant loading screen, you choose the main game *Cecconoid* or the bonus game *Eugatron* – a 60-level arena blaster inspired by *Robotron: 2084* and *Smash TV*. Collect containers in your main quest as they grant extra speed, shots, lasers, and 1-Ups. Turrets track you, mines explode when you are near, and certain rooms contain waves of enemies that must be cleared before the door will reopen. Control options are numerous and include the Abstraction dual controller, CD32 joypad, and other joypad adapters. The amazing music by Hoffman suits the game, having also provided the original soundtrack. It's his coding prowess that stands tallest, wowing the player with an almost perfect conversion and dazzling particle FX. (A warning for epilepsy sufferers, as this game features flashing lights and colours regularly.) The addition of Achievements to unlock as you play adds to the reasons to go back, and while difficult in general you will learn and make progress each time. This is an outstanding release from the revived Thalamus label. Don't miss it. </BODY>

SCORE: 95%



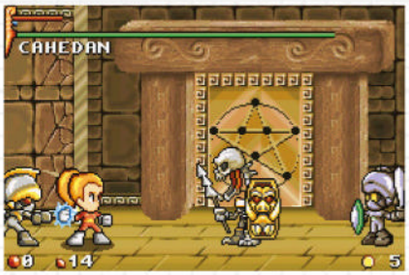
<!--- [AMIGA] FLASHING RED HOMING MISSILES WILL TARGET YOUR SHIP (TOP RIGHT), BUT YOU CAN SHOOT THEM DOWN.

<!--- [AMIGA] IN EUGATRON, PICK UP STARS TO TEMPORARILY BOOST YOUR SCORE MULTIPLIER AND GRAB THOSE HANDY POWER-UPS.

NEW GAMES NEEDED

Our new email address is waiting for all your homebrew news, previews and more: **retrogamer@futurenet.com**

THE HOMEBREWER'S KIT



<!--- [GAME BOY ADVANCE] ELENDEL TAKES ON GENERAL CAHEDAN AT THE END OF KIEN'S FIRST CHAPTER. --->

<!--- [GAME BOY ADVANCE] TURNING THE TUTORIAL ON REVEALS THIS HELPFUL GHOST, WHO OFFERS ADVICE AS YOU DISCOVER NEW THINGS. --->

KIEN

<INFO FORMAT: GAME BOY ADVANCE CREDITS: AGEOFGAMES FOR INCUBE8 PRICE: $59.99 PHYSICAL CARTRIDGE WEB: BIT.LY/KIEN-GBA />

<BODY> **Finally published nearly 20 years after development started, this Italian-produced game mixes platforming with action RPG mechanics.** The seven Masters Of Malkut have disappeared and evil corrupts the land, leaving you to restore harmony as either the warrior Kjan or priestess Elendel. Fighting enemies with weapons or spells, the characters can break open coffers for extra weapons, power-ups and spells, while collected coins grant an armour bonus (which is lost when too much damage is taken). The excellent cartoon-like characters move around large maps with well-drawn backgrounds, and the soundtrack is enjoyable to listen to. Astral and dimension gates help move you around the world, while passwords save your progress. While it's challenging, it's an original idea that's been well worth the long wait. </BODY>

SCORE: 83%

<!--- [ZX SPECTRUM] MAKE SURE YOU DON'T SLIP ON THE ICE, AND PRESS ACTION TO DUCK UNDER THE WATER TO AVOID BADDIES. --->

<!--- [ZX SPECTRUM] PRESS ACTION ON THE PURPLE SPRINGS TO BE LIFTED OR USE THE LIFTS TO MOVE BETWEEN FLOORS. --->

DR ACULA

<INFO FORMAT: ZX SPECTRUM CREDITS: COLIN STEWART PRICE: FREE WEB: BIT.LY/DR-ACULA />

<BODY> **Colin Stewart's 1984 game *Frank N Stein* had you collecting body parts to make the monster, but now the scientist must enter the deadly vampire's lair.** On each screen, Frank must collect six parts of Dr Acula's coffin, before hitting the switch or cross at the top to complete the level before time runs out. Cunning traps, handy springs and lifts, and various monsters all stand in your way. This long-awaited sequel brings more of the same fiendish platforming that the original is famous for, while looking and sounding great. Spooktacular fun that Spectrum owners should instantly seek out. </BODY>

SCORE: 86%

PROCESSING

<INTRO> ADAM NIGHTINGALE AKA MINION (@M1N10N) IS BRINGING ULTIMATE'S SPECTRUM CLASSIC ATIC ATAC TO THE TRUSTY PICO-8 </INTRO>

<BODY> **"This is my second attempt at an *Atic Atac* remake," Adam tells us.** "The first was back in 2002, as I love this game from my BBC and Spectrum days. A mate of mine gifted PICO-8 to me, so not wanting to seem ungrateful I started to code in it! It feels like an old system with its brutal limitations, yet it is so much fun to use."

The preview we played is almost complete, with Adam telling us, "The map is complete, all doors, trapdoors, warps, objects, food, etc are there. I've also made a few minor changes I hope improve the game – moving one set of warps to fit into my code easier, changing Dracula so he will vanish if he's in the room you're in and carrying the crucifix, etc. I've managed to get all the enemies in there albeit with limited animations."

So what game is Adam working on next? "I've recently picked up *1942* again so this may be my next offering, as well as *Gyruss* and *Galaga* partial games so they could be imminent releases too." </BODY>

<!--- [PICO-8] THE WIZARD CAN USE THE BOOKCASE'S SECRET DOOR, WHILE THE SERF CAN MOVE THROUGH BARRELS. --->

HOT TOPIC

RETROBATES MULL OVER THE SCENE'S MOST INTRIGUING ISSUES

» The Raspberry Pi computers have many great emulators, but some find the setup to be a bit fiddly.

EXPLORING EMULATION

A chat about the most important retro-gaming technology

DARRAN JONES

NICK THORPE

TIM EMPEY

We were rather inspired by Rory Milne's Emulation Nation feature this month, so we decided to take some time to talk about our own experiences with emulation. So lets cover everything, from the free projects that most people think of, to the commercially released official compilations and numerous mini consoles.

NICK

How did you first find out about emulation? For me, it was a newspaper article about MAME.

TIM

I first thought it was about huge flightless birds…

DARRAN

MAME was my first experience as well. It was introduced to me by my brother of all people, who showed me *Double Dragon* running on his PC. Or did I show it to Matt on my PC? Christ, I can't remember. We definitely played *Double Dragon* first though.

NICK

I didn't actually see one in action until a year or two later. The school computer room was just filled with people playing *Dragon Ball Z* and *Sonic* games on ZSNES and Genecyst. It didn't take long for the IT department to shut that little trend down.

TIM

I dabbled with MAME for about a week back in 2007 I think, but it didn't go very well. I played a few arcade games from the Nineties, though it was a bit of a pain using the keyboard to control them as I didn't have an appropriate controller.

> "There's no denying that the likes of Raspberry Pi and MiSTer are the go-to experiences for more of the hardcore now"
>
> DARRAN JONES

DARRAN

I did get well into it at the time as it was fun playing stuff I used to enjoy playing as a kid, but many of my friends weren't as impressed as I was. I guess the likes of *Pac-Man* and *Space Invaders* are a hard sell when new games like *Super Mario 64* and *Tomb Raider* were about.

NICK

I didn't really have much of a choice but to get used to keyboard controls, because I didn't have a way of playing *Sonic* mods on real hardware. Once I got down to it, ROM hacks were most of the appeal of emulation for me.

DARRAN

I've never really been into the ROM-hacking scene. I could never get on with PEEKs and POKEs on numerous Spectrum games, even though a lot of them looked fun.

TIM

My brother used to reset our C64 with a paperclip to enter some PEEKs and POKEs, he wouldn't let me do it though saying I'd break it. Didn't get into ROM hacking myself either.

DARRAN

I can see why it's appealing but I always find standard things like adding saves to N64 games to be extremely annoying. Ultimately, it's very rare for me to mess around with emulation in my spare time. I just find it all too much of a faff.

NICK

I do find it useful to keep up with what's going on

» [Arcade] Nick's pretty sure that *Pac-Man* was the lead image on that newspaper article about MAME.

» [Switch] These days, even Nintendo bundles a library of emulated SNES games with a Switch Online subscription.

» Mini consoles might not be for you, but they simplify emulation for plenty of players.

in emulation, mostly for comparison purposes – after all, emulation is the backbone of most modern reissues of classic games. But if I'm playing for pleasure, it's mostly on real hardware.

DARRAN

Same here. Although, I'm a big fan of the numerous mini systems and I have the Mega Drive ones, the SNES and NES systems and also the PC Engine Mini. Are these mini systems more to your tastes Tim when it comes to emulation?

TIM

I think they're the way to go if you can't get the games on modern consoles. I had a blast playing on that mini Amiga I got for my brother, hope he's been enjoying it too – though he has just bought a PS5.

NICK

That's certainly why I got my mini consoles, things like the PC Engine Mini and Mega Drive Mini 2 have got plenty of games I can't afford on real hardware. Plus, the rights holders actually get paid and it's all easy to set up.

DARRAN

I just don't find it appealing to mess around with emulators any more. Although I've noticed my cousin Martin has been experimenting with a lot of *F-Zero* and *Super Metroid* ROM hacks on his SNES Mini so I may have to reconsider.

NICK

I think convenience is something that a lot of people overlook when evangelising about open source emulators over commercial releases. They're so important for preservation, but they're certainly not always all that user-friendly.

DARRAN

I'll say, Raspberry Pi terrifies me. What about you Tim, would you want to tinker with them? Maybe build the ultimate mini Amiga?

TIM

Huh? Is that a new addition to Quality Street?

DARRAN

Oh bless you Tim, that's so sweet, but so incredibly wrong.

TIM

I prefer Roses any way.

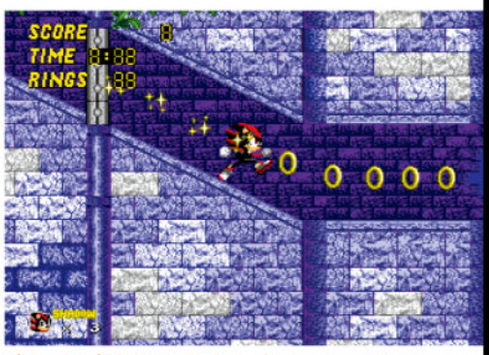
DARRAN

There's no denying that the likes of Raspberry Pi and MiSTer are the go-to experiences for more of the hardcore now, but as long as compilations like *Capcom Arcade Stadium* and *SNK 40th Anniversary* are available I'm happy to play with those instead. (Providing the emulation authors are credited of course.)

NICK

Same, though now I'll probably think of tiny chocolates whenever I do. Thanks, Tim.

» [PlayStation] Emulators offered us a way to play our official PlayStation discs without hogging the living room TV.



» [Mega Drive] ROM hacks like *Project Shadow 2* were a big part of the appeal of emulation for Nick.

» [Switch] Digital Eclipse projects like *SNK 40th Anniversary Collection* are the gold standard for commercial uses of emulation.

READERS REACT

How did you first discover emulation?

Ashley Day
I found a CD-ROM full of Spectrum tape images in the Amiga section of my local computer store. How cool is that? Emulating old hardware on old hardware!

Anatoly Shashkin
Was looking for the smallest possible games to download from a local BBS in Nineties Russia, and happily discovered a bunch of ZX Spectrum games and an emulator for DOS. Good times.

PandaMonium
In like, 2007 or something, I wanted a way to play PS1 games on the computer while my family hogged the TV. So my stepdad found ePSXe. It let us boot official games from the PC's disc drive. I had my way, and could play all the *Spyro*, *Crash*, *Spider-Man* and *Tony Hawk's Pro Skater* that I wanted.

Nokia3310
I got *Speccy Classix 98* from HMV. A weird thing since it was presented as a legit PC budget title when really it was a ZX Spectrum emulator with lots of ROMs on CD. Publishers put out bootleg ROM collections and retail stores sold them. Different times.

Andreas Jervström
1998. A classmate said he played *Final Fantasy V* in English on his computer and I was like, "Yeah, and I have singing unicorns in my backyard." The day after I did indeed have singing unicorns in my backyard.

Richard Dare
In the mid-Nineties, *Amiga Shopper* magazine had a Spectrum emulator on its cover disk. It was amazing to play Speccy games on my Amiga 1200. I'd previously read about Mac and PC software running on the Amiga via hardware add-ons.

MightyQDawg
In late-1996, I was studying computer engineering and figured emulation of old consoles was possible on current PCs. When I was looking up technical information to implement one, I learned that a lot of people had already had the same idea.

David
I discovered emulation when UltraHLE became big news. I was still in school and I remember being so excited when I figured out how to make it work.

StuBlad
Looking up info about *Sonic The Hedgehog*, finding forums dedicated to it and using early emulators like Genecyst to play it.

COLLECTOR'S CORNER

READERS TAKE US THROUGH **THE RETRO KEYHOLE**

BIOHAZARD MOBY DICK NEMESIS TYPE 1-2 FIGURES

"I just had to tick off a childhood dream and purchase a Nemesis figure."

AMOUNT PAID: £150

BIOHAZARD CODE: VERONICA INFANTS MUSIC BOX

"I finally got one in 2023 and it is one of my favourite items."

AMOUNT PAID: £1,500

BIOHAZARD CODE: VERONICA ASHFORD GOLD LUGERS

"I was lucky enough to get a loose set via an eBay seller many years ago and only recently picked up a boxed set via a *Resident Evil* Facebook group."

AMOUNT PAID: £400

COLLECTOR IN RESIDENCE

There's no biohazard waste detected in this Resi collection

BIO

NAME:
Luke Teenans

LOCATION:
Uckfield, East Sussex

ESTIMATED VALUE OF COLLECTION:
£20,000

FAVOURITE SYSTEM:
PlayStation

FAVOURITE GAME:
Resident Evil 3: Nemesis

INSTAGRAM:
@Resident_Evil_Collector

Luke Teenans' love for all things *Resident Evil* started with the first game and enjoying the games with his brother. "Upon watching my older brother play *Resident Evil*, I was hooked on the classic mansion," he tells us. "I enjoyed trying to solve the puzzles and survive the horrors within to escape. The iconic first zombie will always live long in my memory. With the continuation of Capcom producing more amazing titles such as *Resident Evil 2* and *3*, I was hooked, and it also became something my friends at school would talk about a lot."

Luke explains his fondest memory from this time with *Resident Evil* was playing the excellent series with his friend. "I remember going to my friend's house after school and playing *Resident Evil 3: Nemesis*. Occasionally, we would swap between the first three games and just try and find different ways of getting past enemies, try and unlock stuff or even see who could complete the game the fastest." When asked what his favourite game in the series is, Luke has no hesitation in explaining. "*Resident Evil 3*, the characters, the story, the soundtrack and unlockable items made for a fantastic entry in the series. Some criticise the length of the game, but I just see it as more of a reason to pick up and enjoy casually playing a title with horror and action combined. Nothing beats escaping the Nemesis as Jill Valentine and making the decision to get out of the city alive!"

After continuing to be enthralled by the series as he got older, Luke always regrets never owning a Nemesis figure and decided to put that right in his adult years. This started his bug for collecting *Resident Evil* merchandise and he has never looked back. "In 2008, I decided to track down a sealed boxed Nemesis Type 2 figure," Luke explains with excitement. "I was really thrilled to finally own something connected to my favourite [*Resident Evil*]character. Although this then led to a now 16-year hobby of collecting *Resident Evil* merchandise."

This journey to collecting *Resident Evil* items and games has led to Luke immersing himself in the game's community. "I've met so many great friends and seen people with incredible collections over the years via Facebook and especially Instagram. What I enjoy most is finding out about items that I never knew about that excite me or finding out about the history of an item before finally obtaining one for myself."

We asked Luke what his ultimate *Resident Evil* grail item to find is and he told us about two things he would like. "An original 1996 *Resident Evil* poster. Nothing more exciting than owning a poster based on the original title, I would be sure to frame it straight away if I ever came into owning one." And the second. "To celebrate *Code: Veronica* in Japan. Capcom and Sega released 2,000 limited-edition numbered Dreamcast consoles – 1,800 of these were red, in the theme of Claire Redfield and the other 200 were blue, in the theme of Chris Redfield. I'd love a Chris one to add to my collection."

Got an impressive collection of your own? Contact us at:

RetroGamerUK @RetroGamer_Mag retrogamer@futurenet.com

RESIDENT EVIL PROMO STANDEES

"Once I got to the stage of collecting the videogames and figures from the series, I got a fondness for collecting promo standees and posters from the series."

AMOUNT PAID: £100-150

JEWEL IN THE CROWN

AMUSEMENT PARK ATTRACTION MANSION KEYS

■ "The Nightmare Returns Amusement Park Attraction Mansion Keys set is very hard to find as a full set including the Sword, Helmet, Shield and Armour Key. This is due to it only being available at a limited-time event in Japan. I've been fortunate enough to obtain two sets in the past few years."

PAID: £360

BARGAIN HUNT

Your guide to the rising world of retro prices

THE COVER STAR

NINTENDO DS

There are numerous cool variants of Nintendo's innovative handheld. Original models shouldn't cost more than **£50** boxed, while the DS Lite (shown here) is similarly priced.

PANORAMA COTTON

This is an expensive Japanese exclusive Mega Drive title that you'll struggle to get much change out of **£500** for. Even the recent Strictly Limited re-release hits over **£75** now.

MADWORLD

This excellent Platinum Games action title showed what the Wii could do and it's cheap to pick up. Most complete copies sell for under **£7** with some as low as **£4.**

TECHNICIAN TED

Technician Ted can be picked up for as little as **£2** for the 48K version, but the 128K Mega Mix version can hit as high as **£20.**

LITTLE BIG ADVENTURE

This PC adventure comes in a big box format with budget versions costing as little as **£8.** The original big box editions sell for over **£40** if looking for a complete one.

DAYTONA USA

Being a huge hit on Saturn means there are lots of copies out there. Used copies can be picked up for about **£5** with pristine copies costing over **£30.**

WARIOWARE INC: MINIGAME MANIA

Minigames don't equal a mini price. Used complete copies cost over **£40** and those in good condition can sell for more than **£50.** Outside of Europe it's known as *Mega Microgame$*.

THIEF: THE DARK PROJECT

Budget editions of this Looking Glass classic are an absolute steal and can be found for as little as **£2.** However, if you want to own a good condition complete boxed copy of the seminal stealth game prepare to be robbed for **£50.**

HOW MUCH?!

WII: SUPER MARIO 25TH ANNIVERSARY EDITION

You may remember a time when you couldn't give Wii consoles away for love nor money. Well, this highly graded special *25th Anniversary Mario* pack sold for **£28,000** this month. At least it came with free postage.

Prices correct at time of print

COMPILING COMPILATIONS

Darran expresses his love for the humble games compendium

Ever since I first started gaming I've been obsessed with compilations. Being from a poor family, compilations were an essential part of my collection as they represented fantastic value for money for my cash-strapped mum.

I've already mentioned my love of *The Magnificent Seven* elsewhere within this issue, but I've other favourites as well. *We Are The Champions* (also from Ocean) featured *IK+*, *Rampage*, *Barbarian*, *Super Sprint* and *Renegade*, while *The Gold Collection II* featured the bangers, *Kung-Fu Master*, *Gunfright*, *Knight Lore*, *Bounty Bob*, *Desert Fox* and *Questprobe*. I also put a lot of time into *Taito Coin-Op Hits* (more Ocean), which featured *Arkanoid*, *Arkanoid: Revenge Of Doh*, *Bubble Bobble*, *Flying Shark*, *Legend Of Kage*, *Rastan*, *Renegade* (again) and *Slap Fight*. I also owned one of the *Dizzy* collections, but can't remember which one.

When I moved over to consoles I noticed that compilations were nowhere near as prevalent, although the Mega Drive had several. One of the best was *Classic Collection* which featured *Alex Kidd In The Enchanted Castle*, *Altered Beast*, *Flicky* and *Gunstar Heroes*, and the various *Mega Games* collections, which typically featured three games. Plenty of value packs existed, but they usually featured just two modern games.

By the time the 32-bit generation rolled around, collections featuring once brand-new releases were incredibly rare. You certainly got decent three-game charity collections under the Help and Escape brands (thanks for reminding me Twitter) but the focus during this period of gaming was more on collections of retro games, such as the popular *Namco Museum*, Capcom's *Capcom Generations* series and various efforts from Sega.

The enhanced power of the PS2, Xbox and GameCube meant repackaging classic games became even easier. *Capcom Classics Volume 1* and *2* revisited earlier games from the publisher's *Capcom Generations* series, while *Namco Museum 50th Anniversary* revisited 14 games from its PlayStation days.

Sega continued its *Sega Ages* range that started on Saturn, releasing updates of *Out Run* and *Golden Axe*, but also compilations with M2 based on Treasure, *Space Harrier* and *Wonder Boy* that never made it outside Japan, although we did get *Sega Classics Collection* and *Sega Mega Drive Collection*. I actually don't mind the former, which is a curation of many of the remakes Sega released separately in Japan, but it was savaged on release. The *Sega Mega Drive Collection* was far more impressive and Sega still releases updates of it today. Other highlights from this era included the *Midway Arcade Treasures* series, *Activision Anthology* and the *Taito Legends* collections.

> "HD consoles saw compilations falling out of favour"
> **DARRAN JONES**

The first generation of HD consoles saw compilations falling out of favour again with many publishers choosing to release retro games digitally instead. There were compilations available, but they were often similar to the versions that had come out on the previous generation of consoles or consisted of digital-only games. That brings us to today and there's probably never been a better time to collect compilations.

I own more compilations now than I ever did. While they no longer consist of repackaged games from the same generation, they're still amazing value for money. As prices of original software continue to climb, I feel this is an area where modern compilations shine.

Whether you're looking at Blaze's numerous Evercade cartridges, the astonishing curative efforts by Digital Eclipse or the numerous works of M2, there's never been a better way to get hold of classic games without paying a small fortune. There's still a long way to go when it comes to preserving gaming history and physical compilations featuring contemporary games are now rarer than hen's teeth, but compilations are still going strong and that makes me very happy indeed.

COMPILATION KINGS

THE BEST MAKERS OF COMPILATIONS, PAST AND PRESENT

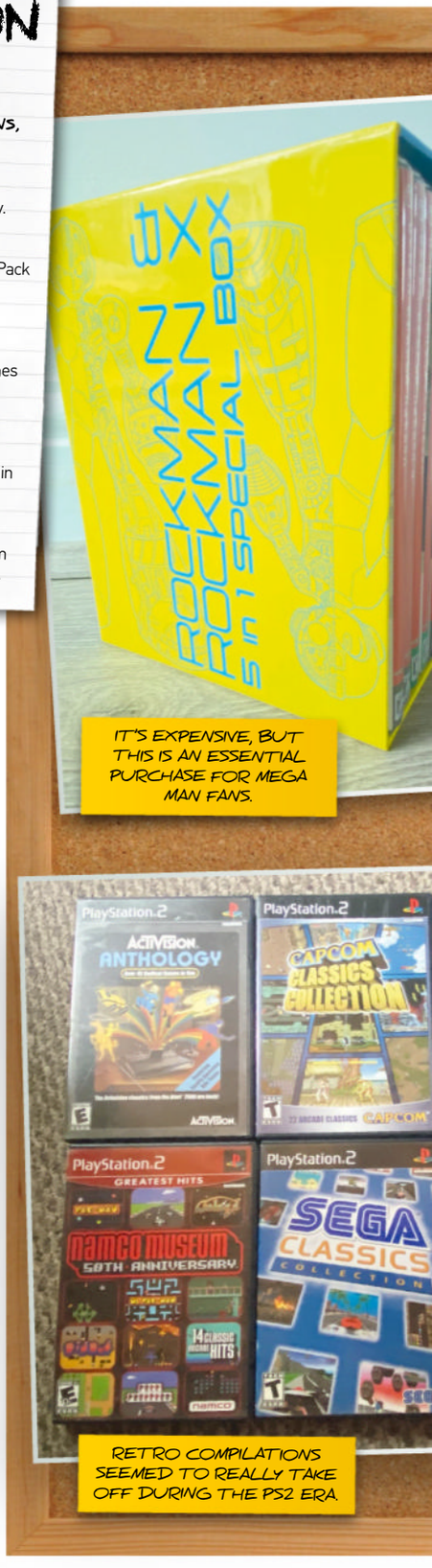
OCEAN SOFTWARE
Ocean released a tremendous number of compilations and many were of a high quality.

CODEMASTERS
Gets a special mention due to its The CD Games Pack which featured 30 budget classics on a CD.

DIGITAL ECLIPSE
When it comes to presenting classic games in a historical context no company currently comes close to Digital Eclipse.

M2
Like Digital Eclipse, M2 has been making retro collections for years and is easily one of the best in the business.

US GOLD
This publisher put out loads of compilations, from arcade collections to the best games from Epyx.



IT'S EXPENSIVE, BUT THIS IS AN ESSENTIAL PURCHASE FOR MEGA MAN FANS.

RETRO COMPILATIONS SEEMED TO REALLY TAKE OFF DURING THE PS2 ERA.

BLAZE'S EVERCADE CARTRIDGES ARE A GREAT AFFORDABLE WAY TO BUILD A RETRO GAMES COLLECTION.
RARE REPLAY IS A TREMENDOUSLY GOOD COMPILATION HIGHLIGHTING 30 YEARS OF THE STUDIO.
THERE ARE PLENTY OF HANDHELD COMPILATIONS, BUT THEY TYPICALLY HAVE FEWER GAMES.
THIS IS QUITE POSSIBLY ONE OF THE GREATEST COMPILATIONS OF THE 8-BIT ERA.
THIS IS ONE OF THE FEW CONTEMPORARY COMPILATIONS AVAILABLE, BUT IT'S LIMITED AND VERY EXPENSIVE TO OWN.
A SMALL SELECTION OF MY MANY RETRO COMPILATIONS ON SWITCH.

COMPILATION MEMORIES

Readers share their favourite collections of classic games

retrokat
The *Thalamus* compilation has to be up there with one of the greatest game collections.

ACO
I still have fond memories of the *Mega Man Anniversary Collection* for the GameCube, which was only released in North America. It was criticised for the jump and shoot buttons on the NES games being swapped, but as someone who didn't have a NES growing up (my cousins did), this fit the bill.

zx_spectrum_30
The Boots *10 Titles For The Spectrum Plus*. The first six Ultimate games, *Spy Hunter* and *Tapper* for ten quid (I always thought *Blue Max* was fun too). Just unbelievable.

Brian H
Ocean Software did some great compilations, especially the movie packages, but my all-time favourite was the Amsoft bundle that came with my Amstrad. It was my first taste of gaming at home.

Dunktech
The *Dizzy Collection* on the ZX Spectrum. When it came out it was great to get a big box version of the *Dizzy* games. It also came with *Magicland Dizzy*, which never seemed to come to the corner shop where I got my budget £2.99 games from.

Deadl0ck
Taito Coin-Op Hits. I got it by mail order from the UK to Ireland. Took weeks, but boy was it worth the wait. Played the hell out of it, especially *Bubble Bobble*. A stone-cold classic!

MrThunderwing
The Magnificent Seven on the good old Speccy! Some absolute classics on this one, *Arkanoid*, *Wizball*, *Yie Ar Kung-Fu*, *Head Over Heels*. Loved it.

ThePorkWizard
Activision Hits Remixed. As well as over 40 Activision Atari games, there were also a dozen licensed songs from the time period including: Flock Of Seagulls, Soft Cell, Squeeze, Twisted Sister, Blondie and Talk Talk.

MAILBAG

HAVE YOUR SAY... SEND US A LETTER OR MAKE YOURSELF HEARD ON SOCIAL MEDIA – **TWITTER.COM/RETROGAMER_MAG**

WIN!

Every month, one lucky writer-in will receive a spanking copy of one of our classic retro books. Good luck everyone!

» [Switch] The original *Tomb Raider* is a classic, but did Dr Jeff Buddenhagen buy the recent remaster?

STAR LETTER

LICENCE TO THRILL

Dear **Retro Gamer**,

What has happened to the humble film licence? It felt like a new 8-bit adaptation was being released every week during the Eighties, but now they seem incredibly thin on the ground? Granted, we've been blessed recently with new games based on *The Terminator*, *Avatar* and *RoboCop*, but they're not based on any films. Games based on TV shows seem to be thin on the ground as well, which is particularly galling when rubbish like *Neighbours*, *Postman Pat* and *Thomas The Tank Engine* were all readily available during the Eighties.

To me, these licences were just as much fun as the latest arcade conversion and it's a real shame that they appear to be dying out. We had a few during the Xbox 360 and PS4 period, but most were still new adventures like *Wanted: Weapons Of Fate*. Is this the end of the classic subgenre? What a shame.

Kind regards,

David Greene

You're right David, it is a shame we don't get film adaptations like we used to. We can only assume that the cost of the licence makes it too high to consider making them. When you look at how long AAA games now take to make, the film would be a distant memory by the time its accompanying game came out. We'll send you out a book and try and find one with some movie adaptations in it.

» [PC] *Lego Star Wars: The Skywalker Saga* is one of those rare film licences that actually follows the plot of the films it is based on.

TOP OF THE FLOPS

Dear **Retro Gamer**

I love the mag and absolutely look forward to it every month. But, with this The 100 Greatest Retro Games list have you guys been hitting the bottle a little too hard? *Super Mario Bros 3*, *The Legend Of Zelda*, *Final Fantasy VII* and Super Metroid, all ranked lower than *Tomb Raider*?! Good god, gents. As you were.

Dr Jeff Buddenhagen

PS *Super Mario 3* should be in the top 5!

Absolute Blasphemy!

PPS *Mario Kart 64* at 90? Ha ha ha ha you wouldn't have a magazine to publish without this game! C'mon guys!

MISSING IN ACTION

Hi **Retro Gamer**,

I really liked The 100 Greatest Retro Games list published in issue 257 but one title is missing, *Star Raiders*, a 1979 Atari 8-bit computer game by Douglas Neubauer (designer of the Pokey sound chip). It is one of the first killer apps (it pushed Atari 400/800 sales) and many programmers consider it among the best games in history. Some coders interviewed in past **RG** issues put *Star Raiders* in their personal top tens. A first-person view, galactic map, star bases, shields, damages and fuel made this 8KB game outstanding for its time.

Keep up the good work!

Regards,

Filippo Santellocco (Philsan)

» [Atari 8-bit] *Star Raiders* landed in position 751 in our poll as only one person voted for it. Was it Filippo?

» [Game Boy] *Solar Striker*'s first boss should bring back some memories for Paul.

TETRIS TAKES THE TOP SPOT

Dear **Retro Gamer**,

I was thrilled to see *Tetris* for the Game Boy at the top of your The 100 Greatest Retro Games list recently. Portable games of that quality really blew my mind as a 12 year old. The *Tetris* bundle pack must be one of the greatest of all time too!

However, the very first Game Boy game that I played was the cracking space shoot-'em-up, *Solar Striker*, which had superb music, power-ups and map variety. My mate Tom was one of the first at school to get a Game Boy. Together with *Tetris*, it remains one of my most memorable gaming experiences. Games-on-the-go like that blew our minds back in the day!

Could you do a feature on that game in the future? The Game Boy had so many classics, but *Solar Striker* is a launch title that I feel deserves a lot more love. Like *Tetris*, I still enjoy playing it 35 years on too!

Regards,

Paul Napleton

It's great to see that we're still getting so much interest about our Top 100 Greatest Retro Games feature, even if you don't always agree with the positions of your favourite games. Maybe we'll do another one for Retro Gamer 500...

CONTACT US

Snail Mail: Retro Gamer, Future Publishing, Quay House, The Ambury, Bath, Somerset, BA1 1UA

Email: retrogamer@futurenet.com

NOT A STALKER

Dear **Retro Gamer**,

I'm not a stalker or anything but I've been following Darran's Twitter account and have been amazed at the number of games he's already managed to complete this year. Where does he find the time to play all these games? I've got two young children and I find them absolutely draining. I started *Prince Of Persia: The Lost Crown* (on Nick's glowing recommendation) and I'm still nowhere near completing it. How many games has Darran completed so far this year and what's been his favourite?

Regards,

James Maddison

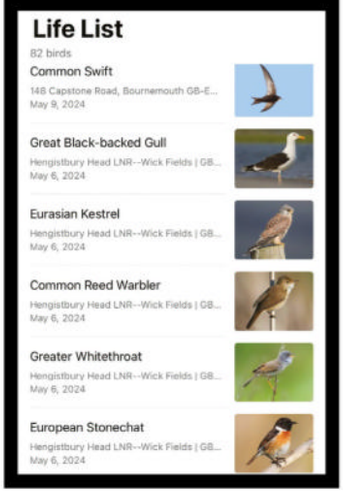
Darran's children are 23 and 19 now, so he's got a lot more spare time, James. According to his list, he's managed to complete 28 games this year so far and his favourite is Nightdive's *PowerSlave Exhumed*, with *Castlevania: Curse Of Darkness* on PS2 coming a close second.

» [Switch] Keep plugging away at *The Lost Crown* James, it's absolutely fantastic.

DISCUSSED THIS MONTH

Merlin

Darran recently discovered a new bird app called Merlin that lets you easily identify birds by their sound or through any pictures you own. In predictable fashion he hasn't stopped going on about it and has started a new Life List on the app. After animatedly discussing it in a recent meeting, Tim turned around and said, so basically you're just playing real-life *Pokémon Go*.



» Nintendo's 3DS has been a popular choice, and rightly so – it felt amazing upon first seeing it.

Your say

Every month, Retro Gamer asks a question on social media and prints the best replies. This month we wanted to know…

What's your favourite Nintendo hardware innovation?

Tony Cruise
Taking the world into 3D worlds in partnership with Silicon Graphics with the Nintendo 64. The first time the world saw the 3D Mario head was a groundbreaking experience.

Craig
The N64 controller was a game-changer along with the 3D world in *Super Mario 64*. The analogue joystick and the different ways to hold it was amazing back in 1996.

Nick Westwood
Unpopular choice, but the 3DS 3D screen, I was blown away when I first saw it, it was so different and exciting, shame it didn't take off. The new 3DS showed what could be possible but it was too late. Now 3D is relegated to VR.

Shiiiva TM
The Nintendo DS. The touchscreen was revolutionary for gaming and everyone fell in love with it!

Grail Quest
The joystick on the N64 controller. However, 3D without glasses on the 3DS was utter magic.

David Autovino
While scaling/rotation CAN be achieved in software, the SNES supported it at the hardware level. Games that used Mode 7 to create a 3D gameplay space, like *F-Zero* and *Pilotwings*, felt unlike anything I'd ever played to that point.

Jason
The GameCube handle. It let me carry it around like a lunchbox. I never actually took mine anywhere, but I knew I could if I wanted. Shame the disc tray was too small for my sandwiches though.

Jefferson Steelflex
Nintendo ain't got shit on the Blast Processing the Sega Genesis had. [There's always one – Ed]

RobotoLoboto
The Wii Remote because we have smaller evolved ones with Switch now and possibly for future Nintendo system generations.

Simply Shooters
The SNES controller. It's been a race since to have the raw functionality and ergonomic comfort for young and old players. The NES broke them, and the SNES solidified them. If you think back, if that controller wasn't so 'just perfect', the console wouldn't have succeeded.

Llama King
The N64 controller. It had the 3D stick and the add-on Rumble Pak. Both became pretty much standard afterwards.

retro GAMER

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HWATCH
ENS TONIGHT!!

MadWorld

BLACK AND WHITE, AND RED ALL OVER

» WII » 2009 » PLATINUM GAMES

The Wii has a complicated legacy, doesn't it? It was a hugely popular machine in its day, but one that attracted plenty of criticism – even today, plenty of people dismiss it out of hand for being the underpowered, family oriented home of the dreaded 'waggle' controls. In short, it's a console for casuals. So what happens when a game comes along that is practically everything a Wii game isn't supposed to be?

Well, *MadWorld* is just about the best example you can get. For a start, the 18 rating on the box indicates that it's certainly not family friendly – on the contrary, it's a gloriously over-the-top celebration of lethal violence in which our chainsaw-armed protagonist Jack executes countless hapless goons, all for the pleasure of a bloodthirsty television audience. Guts are shredded, spines are snapped and hearts are torn from bodies, and that's all before you get to the really creative kills involving street signs, beds of spikes and jet engines. All of this is conveyed in a striking comic-book style too, emphasising the gory nature of the action while minimising the impact of the Wii's technical constraints. Does it use motion controls? Sure, but ultimately they serve to connect you to the carnage in a way other platforms couldn't, and it's a tough game too so you shouldn't expect to just flail your way through.

Perhaps unsurprisingly, *MadWorld* didn't sell in huge numbers. It didn't appeal to the audience that had come to the console for *Wii Sports*, nor did it sell consoles to the sceptics, leaving it to cater to the minority of Wii owners who prized that kind of core gaming experience. But if you're the kind of player that slept on the Wii back then, it's a game that should prompt you to take a second look at the machine – it has never been ported, and really just wouldn't be the same on any other console. ✱

ENDGAME

MARIO'S TIME MACHINE

» What do you do if you can't get your kids to listen to their teachers? Why, that's simple – you just enlist the help of a plumber. That's right, Mario can teach the youngsters all about history in this SNES edutainment game. However, you might want to hold fire on that trip to eBay, because some of the lessons Mario teaches aren't quite so wholesome...

01

» Uh oh, looks like the plumber's coming for a visit, and he's not here to check the pipes. Bowser decides that his best option is to make a break for it, fleeing the throne room and heading for the time machine.

02

» Too late. Mario's here, and he's perfectly aware of Bowser's escape plan. To thwart his nemesis, he changes the machine's destination from Paradise to Overload – a predictably explosive course of action.

03

» Bowser finds himself dropping into what initially seems like quite a nice neighbourhood. Unfortunately, he soon notices the chap in the bottom-right corner, who is sporting a somewhat hostile facial expression.

04

» As the tyrannical turtle looks to the sky from which he fell, he immediately realises that his situation is about to worsen. No longer the biggest bully in the playground, Bowser can only stare in horror as an enormous dinosaur's foot looms over his head. It's like *Monty Python*, but nobody's laughing.

05

» Looking at the newly flattened Bowser, it's hard not to ponder Mario's sense of justice. Kudos for involving dinosaurs and all, but a murder has just been committed, no matter how stylish. "Congratulations! You did it," says the game. Yeah, you did it alright – *and now you're going to jail.*

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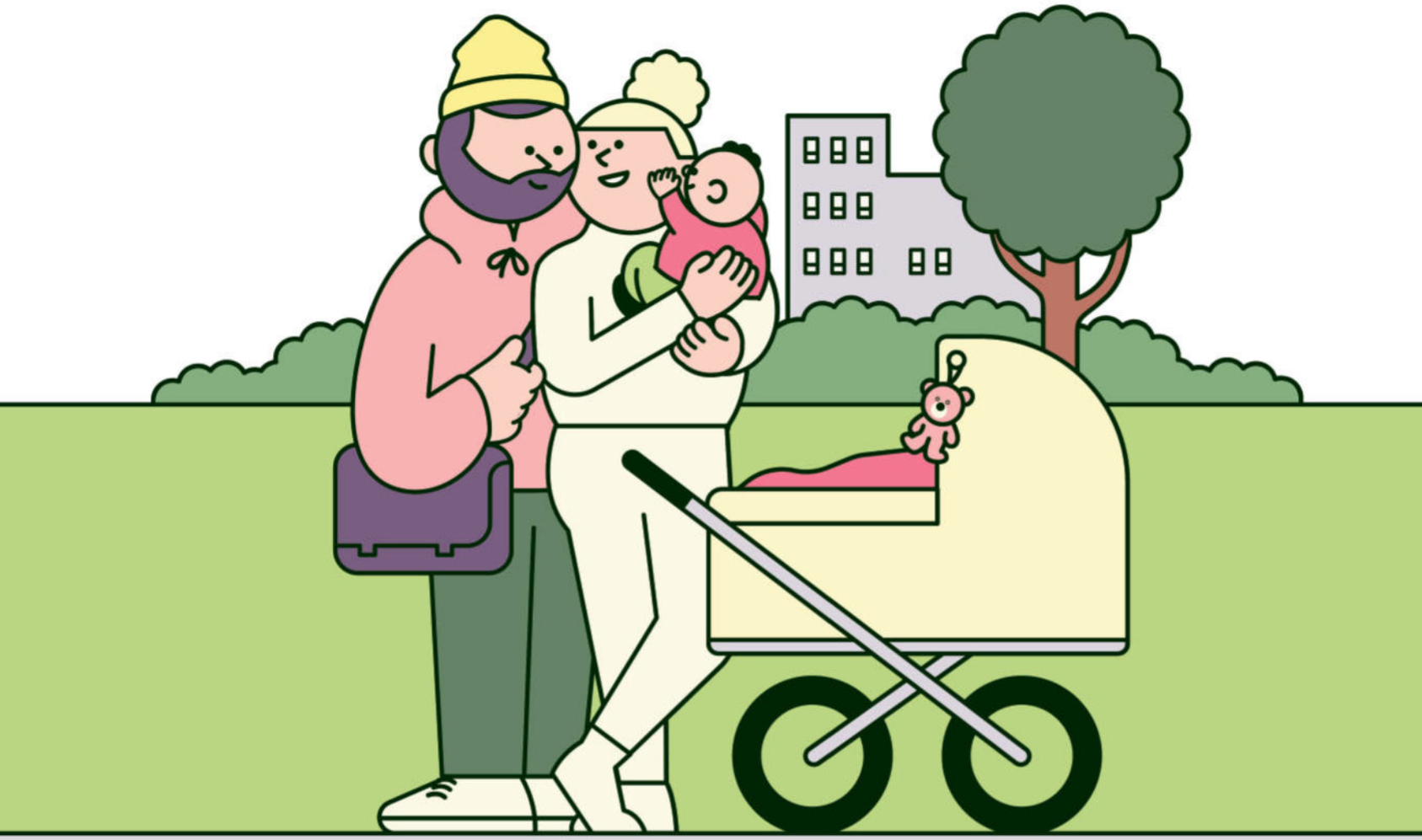

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THE MINI
METROID
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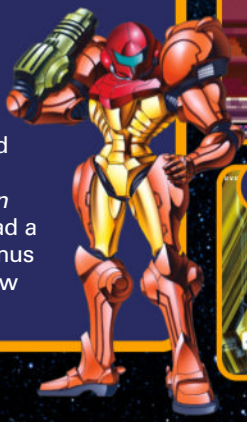
METROID

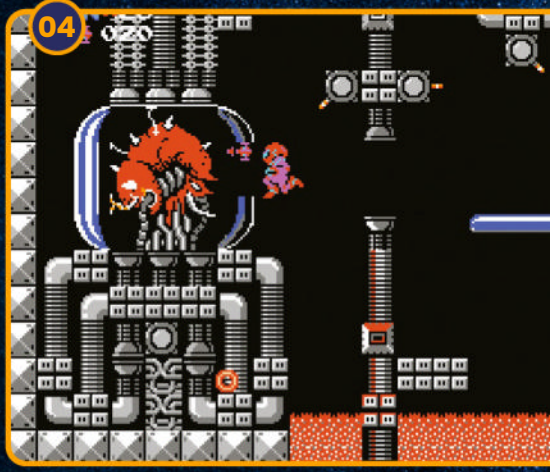
A SIGNIFICANT SERIES

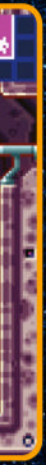
Although she might not be as popular as Mario, Link or Donkey Kong, there's no denying the impact of Samus Aran. When she began exploring Zebes in 1986, she introduced many gamers to a new type of non-linear adventure that put a focus on exploration and atmosphere above everything else. *Metroid* may not have been the first adventure game of its type, but it arguably helped define what would become the Metroidvania genre, particularly with the release of *Super Metroid* in 1994.

While the rest of Nintendo's iconic mascots have been content to appear in games outside of their main genres, Samus has continued to focus on explorative adventuring. Sure, she's a mainstay of the *Smash Bros* series and occasionally pops up for cameos elsewhere, but she's largely all about the bounty hunting and her core adventures have been consistently acclaimed.

So join us, as we celebrate the numerous exploits of Nintendo's most famous bounty hunter. We'll not only revisit every mainline adventure she's starred in, but also spin-offs like *Metroid: Federation Force*. If you've ever had a passing interest in Samus Aran you'll find our new guide indispensable.







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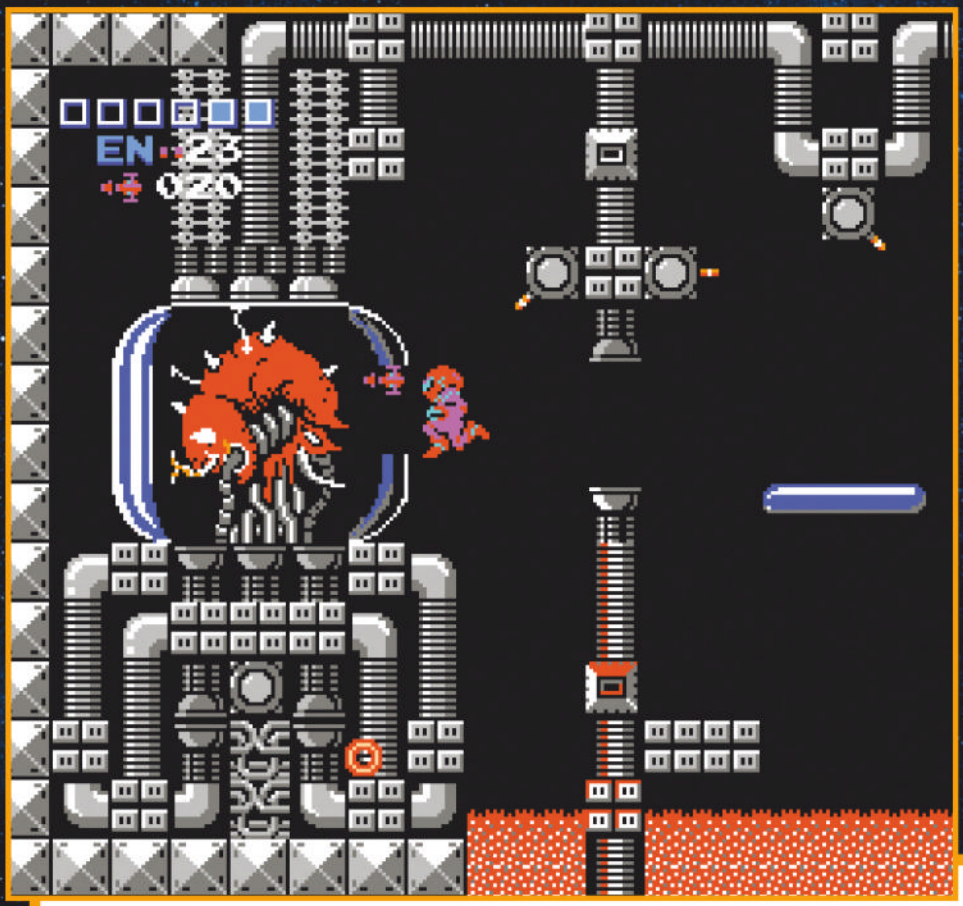


THE ADVENTURE BEGINS

METROID

FAMICOM DISK SYSTEM/NES • 1986

***Metroid* arrived a few short months after *The Legend Of Zelda*, and like Shigeru Miyamoto's game, it made its debut on the Famicom Disk System.** While both titles are adventure games at their core, their approaches couldn't be more different. Where *Zelda* opts for a fantasy approach, with a sprawling top-down game world to explore, *Metroid* delivers a claustrophobic side-on adventure. Both games are classics, but we'd argue that the journey of bounty hunter Samus Aran is far more ambitious. The real beauty of *Metroid* is in the organic structure that initially offers only small sections of the huge planet of Zebes to navigate, but as Samus explores, she gains access to new items and weapons that not only give you additional gameplay mechanics to master, but also unlock previously unavailable parts of the game world.

Nowadays, backtracking in games can be a laborious process, but in *Metroid* it was encouraged. You didn't mind the endless backtracking, even with no map to guide you, because Samus' world just drips with atmosphere, thanks to *Metroid*'s imaginative sprite design and evocative soundtrack. Yoshio Sakamoto, who co-directed the game

and worked as its character designer, revealed the team was heavily influenced by Ridley Scott's *Alien*, and while *Metroid* rarely scares you, it does make for a surprisingly bleak, unsettling experience.

Like *Alien*, *Metroid* also features a female protagonist (although Samus' gender was kept secret until the end of the game) and it proved to be a big sci-fi success, selling nearly 3 million units since launch.

PLAYING TODAY

THE EASIEST WAYS TO CURRENTLY ENJOY METROID

NES

■ The most authentic way to enjoy *Metroid* is on the NES. Sadly, it's getting rather expensive nowadays, with cartridges starting at £40. If you want the game complete in the box you'll need to spend as much as £150 to acquire it.

Game Boy Advance

■ If you don't own *Metroid: Zero Mission*, Samus' original adventure is available to buy separately as part of the Game Boy Advance's NES Classics range. Like NES *Metroid*, it's now rather expensive and can go for as much as £100 today.

Nintendo Classic Mini

■ Nintendo's first mini console features *Metroid* along with 29 other games, including classics such as *Super Mario Bros*, *Bubble Bobble* and *Pac-Man*. While no longer in circulation you can pick it up second-hand for under £80.

Nintendo Switch Online

■ Providing you've got a Switch this is currently the easiest (and cheapest way) to enjoy the original *Metroid*. A number of quality-of-life improvements have been included, but you do need to have a subscription to Nintendo Switch Online to play it.

SHRUNKEN SAMUS

METROID II: RETURN OF SAMUS

GAME BOY • 1991

After the sheer scale and popularity of *Metroid* on the NES, its sequel certainly had a lot to live up to. The popularity of Nintendo's Game Boy meant that Samus' adventure continued on the portable platform, and a rousing little caper it was too. Although *Metroid II* might not have reached the same heights as its critically acclaimed predecessor, it remains a resoundingly solid adventure in its own right, and, like the NES classic, is beginning to rapidly rise in price.

There are caveats, however, and they largely apply to how *Metroid II* looks and sounds. While Samus and many of the game's enemies are instantly recognisable, the overall game fails to capture the sombre tone that made the original *Metroid* so interesting to explore. Fortunately, *Metroid II* is a lot more action-packed – the *Aliens* to *Metroid*'s *Alien*, as it were – and the pace of the game makes it feel very different to its predecessor. It still has many elements in common with *Metroid*, of course, but the need to clear a certain number of Metroids before Samus can move to the next area makes Nintendo's sequel feel a lot more arcade-like as a result.

MEMORABLE CAMEOS

MORE SIGHTINGS OF SAMUS AND THE METROID SERIES

Super Smash Bros

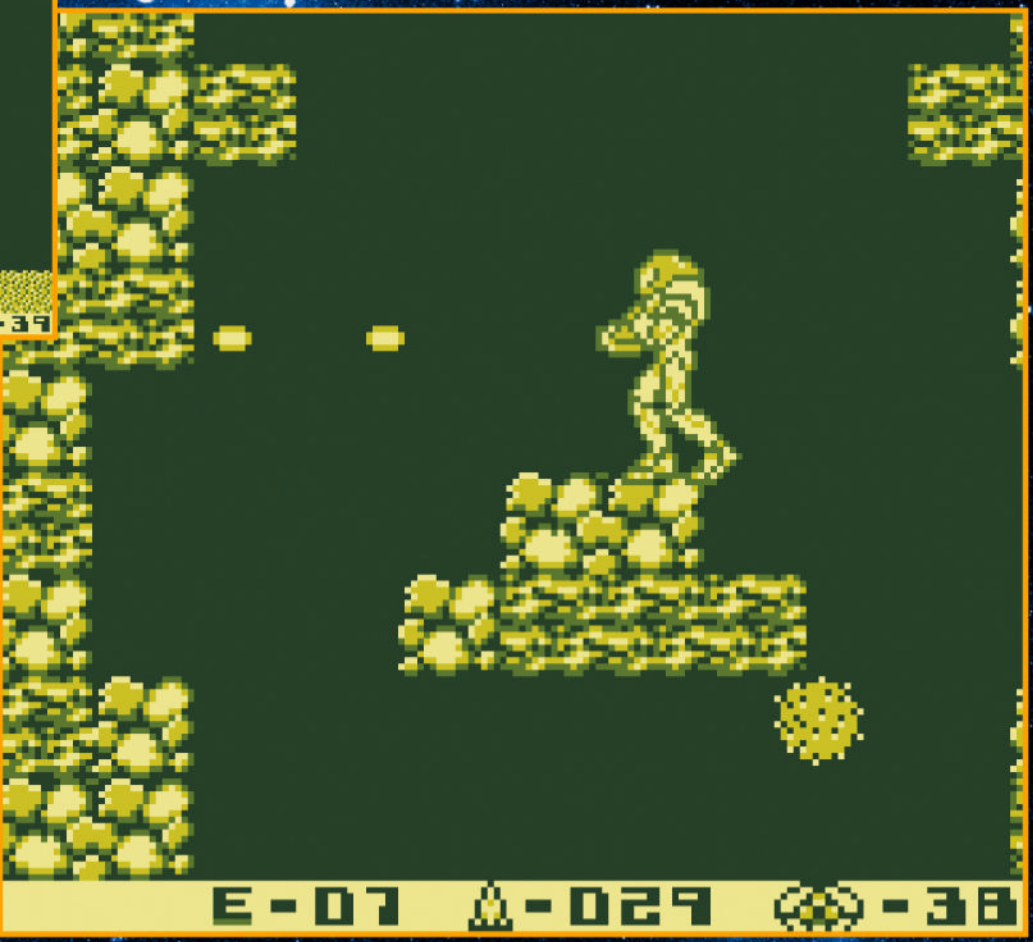
■ Samus has been a mainline addition to Nintendo's popular fighting series since it debuted on the N64. As you'd expect for such a seasoned bounty hunter, she's a strong character who isn't to be messed with.

Bayonetta

■ Although Samus herself doesn't appear in the Wii U or Switch versions of *Bayonetta*, her classic Power Suit does. It's one of several Nintendo-themed costumes that Bayonetta can wear during play.

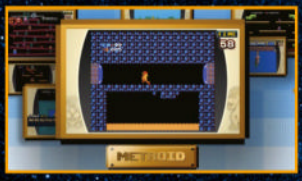
Tetris DS

■ This excellent DS game features numerous Nintendo characters, Samus Aran among them. Catch Mode is themed around *Metroid* and sees you frantically trying to catch and detonate Tetriminos as they fall towards you.



Nintendo Land

■ This Wii U launch game is themed around classic Nintendo franchises including *Metroid*. Metroid Blast comprises three different multiplayer-based game modes: Assault Mission, Ground Battle and Surface-Air Combat.

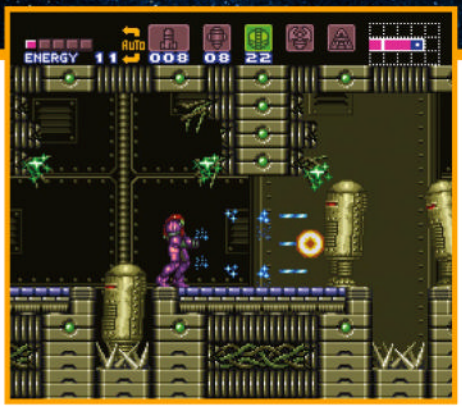


NES Remix Ultimate

■ Originally released in two parts on Wii U, *NES Remix Ultimate* is an updated version for 3DS featuring NES games (including *Metroid*) that ask you to complete unique challenges.

Rocket League

■ Not wanting to miss out on the *Rocket League* craze, Nintendo released a number of Nintendo-themed Battle-Cars for use in the vehicle-based football game, including one that was based on Samus' iconic gunship.



A MOODY MASTERPIECE

SUPER METROID

SNES • 1994

For many, Yoshio Sakamoto's sequel remains the best game in the *Metroid* canon. While there's certainly an argument for it to be placed behind the astonishing piece of work that is *Metroid Prime*, it's not hard to understand why so many consider *Super Metroid* to be a 16-bit masterpiece – after all, it's an exceptionally atmospheric adventure with tremendously satisfying boss encounters, and it delivers a true sense of being stranded alone on a deadly, hostile world.

Notable improvements over previous *Metroid* games include the ability to enable and disable weapons and items via the inventory screen, the ability to move backwards and shoot (far more useful than it actually sounds) and an extremely useful mini-map that makes navigation far easier than in earlier *Metroid* adventures. It looks beautiful too, with brilliant environmental details that really sell Zebes as a living ecosystem and some truly moody tunes that reinforce the game's bleak setting.

Featuring many of the mechanics that would weave their way into later Metroidvanias, *Super Metroid* almost undid the series, as Nintendo let the franchise stagnate for eight long years. It was certainly planned to be the last game in the series on release, but luckily, the adventures of Samus Aran continued.

A PRICEY EXPERIENCE

SO BIG IT NEEDED A GUIDE

Super Metroid's release certainly felt like a significant event. It was one of the few SNES games to be released in a big box and comes bundled with an excellent players' guide for surviving on Zebes. Just be mindful that it's now very expensive to own.

THE MINI-MAKING OF SUPER METROID

YOSHIO SAKAMOTO REVISITS THE ICONIC SCI-FI SEQUEL

How did you come to work on *Super Metroid*?
My boss [producer Makoto Kano] told me that *Metroid* was really popular in North America, so he encouraged me to produce a new *Metroid* game with the high-quality graphics that were becoming possible thanks to the Super Famicom. Of course I said, 'Yes, I'd like to try doing that.' The game design and concept had already been established before *Metroid II* was produced.

What goals did you have in mind for the game?
When it came to making another sequel, this time for the Super Famicom, we really wanted to see how far we could push the SFC.

Was it an issue that only three of the original *Metroid* team worked on the project?
The rest of the [NCL side] was made up of young trainee developers. Of course, young people can be quite impertinent – and those on the *Super Metroid* team certainly were – but I think that's quite important in a way. These young people had enough about them to help us a lot. There were many different personalities in the *Super Metroid* team, which was a good thing.

How was development?
It was a harsh development environment, so I'm sure that some of the staff didn't enjoy the work, but generally the team was full of the, 'Let's go for it!' spirit. I think that was partly because of the timing as well [working on the SFC].

***Super Metroid* was your first Super Famicom game. What hurdles did you face?**
One problem with the shift to the Super Famicom was that it meant we suddenly needed a lot more sprites and artwork, so we shared the map and enemy design responsibilities throughout the team, with everyone making some input in those areas. But doing that resulted in a complete mishmash of styles because of each designer's individual preference, so in the end I had to ask [Tomoyoshi] Yamane to retouch everything that had been submitted, bringing it all together as one consistent design.

How did you find working with Gunpei Yokoi?
Yokoi-san, who at the time was my section chief and who always had fresh ideas, was always angry when he saw us all completely absorbed and working crazy overtime on *Super Metroid*. He came in and said, 'Are you lot trying to produce a work of art or something?' Although he was really unhappy with us, and even though he wasn't the type to dish out praise, Yokoi-san was constantly playing *Super Metroid* once we'd finished it – he was hooked. When other developers brought their action games to Nintendo, he'd always compare them with *Super Metroid* and invariably ended up recommending the third-party developer to 'go away and play *Super Metroid*'. That's how fond he was of our game.

SUPER METROID: BOSS RUSH

MEET THE MAYORS OF SAMUS' BEST 2D ADVENTURE

■ The planet of Zebes is filled with all manner of ferocious enemies, and this is particularly true of the many bosses that are found there. Most of them will put up a tremendous fight and test Samus to the best of her abilities, but the rewards that come from defeating them can be great indeed. Join us, then, as we revisit some of *Super Metroid*'s most memorable guardians.

1 SPORE SPAWN

■ Samus encounters this ferocious fungus while exploring Brinstar and it doesn't take kindly to her intrusion. While it's not the most mobile of enemies, it chucks out plenty of smaller spores that can cause problems for Samus, while its attacks pack quite the wallop. It's not too fond of missiles or Samus' Power Beam, so retaliate whenever you find an opening.

2 KRAID

■ This gargantuan villain returns from the original *Metroid* and is perhaps even more troublesome than in your first encounter back in 1986. Huge in size and with some deadly attacks, Kraid loves to pelt you with fireballs and thorny projectiles. Kraid doesn't like eating Super Missiles though, so try to fire as many into its monstrous maw as you can.

3 CROCOMIRE

■ Haunting the fiery depths of Norfair, this many-eyed beast can make short work of unprepared bounty hunters. Crocomire will track you, forcing you to make a strategic retreat. Stand your ground and slam it with Super Missiles, which will knock it back. Your aim is to force it to unstable ground which will open up and lead to a lava-based bath.

4 PHANTOON

■ Residing in Wrecked Ship, you must defeat Phantoon in order to restore the area's power. This is easier said than done however as Phantoon's ability to phase means attacks can pass straight through it. Patience is the key to this battle and Samus will soon gain the upper hand if you wait for strategic openings to let off your attacks.

5 DRAYGON

■ This aquatic marauder is protected by gun turrets which also ironically can be used to hasten its demise. While Draygon is susceptible to repeated attacks to its immense gut, there's an even quicker way to finish the fight with it. Take out the turrets and they start sparking. You can then use your Grapple Beam to pull Draygon towards a death that's truly electrifying.

6 RIDLEY

■ After encountering Ridley in *Super Metroid*'s dramatic opening you're finally given the chance to finish the fight with the flapping fiend. This is one of *Super Metroid*'s toughest encounters thanks to Ridley's erratic flight patterns and power-sapping attacks. Hold your ground, pelt Ridley with missiles and you'll finally emerge victorious.

7 MOTHER BRAIN

■ Fans of *Metroid* will experience déjà vu as you'll once again find Mother Brain encased within a huge glass container. This time, though, cracking the glass causes the terrifying leader of the Space Pirates to mutate into an even more horrifying form that can make short work of Samus. Survive against this enemy for long enough and you'll receive help from a very unlikely source.

ENERGY
57
8

FROM HUNTER TO HUNTED

METROID FUSION

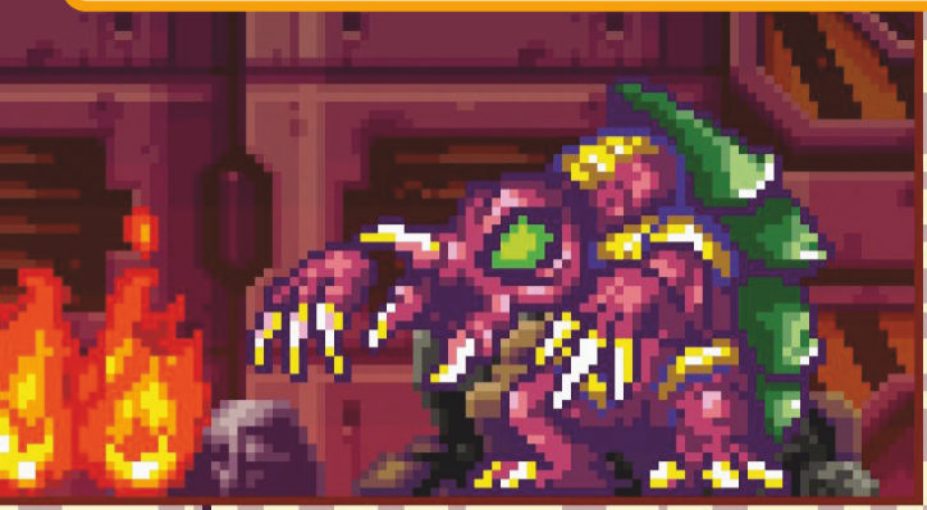
GAME BOY ADVANCE • 2002

It's typical – you wait eight years for a new *Metroid* game to appear, then two come along at once. While all the *Metroid* games can be quite oppressive to play due to their moody atmosphere, *Fusion* is downright terrifying. This is largely due to the introduction of a deadly parasitic organism called SA-X that hunts Samus down during certain sections of her adventure.

Metroid games have always excelled at making you feel like an underdog (until you've retrieved all your latent powers, at least), but being stalked through the dingy corridors by a virtually unstoppable, fully armed clone of yourself remains incredibly tense and is just as traumatic today as it was when we first experienced it in 2002. Panic sets in whenever SA-X appears and you'll often have to resort to flight if you want to escape unscathed.

Even without the ever-present threat of SA-X, *Fusion* is one tough game, so it's rather gratifying that Samus has picked up a number of useful skills. While Samus' newfound agility allows her to grab onto ledges and climb ladders and railings, her ability to absorb nearby X Parasites is even more handy, as it allows her to boost her health, missile and bomb supplies.

You'll need those supplies too, as *Fusion*'s bosses put up quite the fight and range from gigantic space spiders and horrifying Metroid mutations to old favourites like Ridley. Even Fusion's story has been enhanced, with constant narration from Samus at key points and even cutscenes. Many fans were disappointed that Nintendo didn't choose to remake *Super Metroid* for its new handheld, but *Metroid Fusion* is a more than worthy successor. Just be aware it's rising in price.



PRIMED FOR ACTION

METROID PRIME

GAMECUBE • 2002

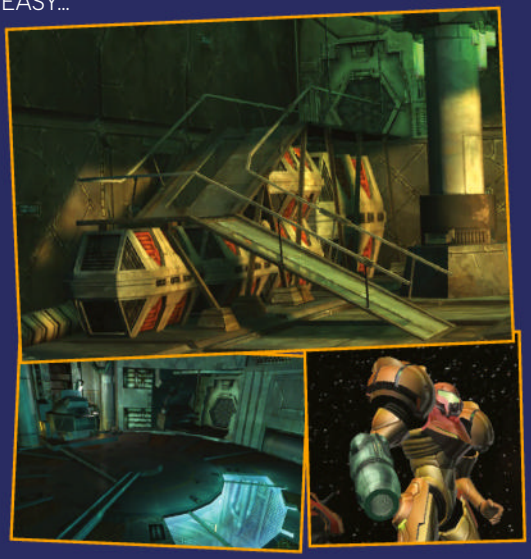
***Metroid Prime* is not in any sense a traditional first-person shooter.** Samus' ability to lock on to enemies and evade incoming attacks immediately made it stand apart from similar-styled games on release, while its carefully balanced controls made the numerous platform sections incredibly easy to pull off. While it's predominantly first-person, Samus' Morph Ball ability utilises a third-person perspective, which is typically used for the few puzzle-like elements found throughout the expansive game world. It features the same organic exploratory approach of previous games in the series, but introduces new gameplay mechanics in the form of a number of different visors that Samus must switch between. In addition to thermal imaging and X-Ray vision, Samus can also scan pretty much anything she encounters, from enemies to locations. Scanning not only reveals weak points in bosses but also slowly unlocks *Metroid Prime*'s well-crafted story, which is arguably one of the best in the entire series.

In addition to its absorbing gameplay, *Prime* is incredible to look at, with lush welcoming environments that still stand up today (as the recent remaster proves). From the icy wastes of the Phendrana Drifts to the gloomy depths of the Phazon Mines, *Prime* is a constant joy to explore, with little touches like explosions momentarily reflecting Samus' face in her visor adding to the atmosphere. A huge success for Nintendo and relatively inexpensive today, it also lets you connect to *Metroid Fusion*, unlocking several extra bonuses, including the original *Metroid*.

A DIFFICULT GESTATION

MAKING METROID PRIME WASN'T EASY...

■ *Metroid Prime* could have been a mess. Nintendo had been struggling to create a 3D *Metroid* for years, bypassing the N64 completely and eventually setting its sights on the GameCube. Texas-based developer Retro Studios was given the unenviable task of creating Samus' first 3D adventure and began work on a third-person action game. Shigeru Miyamoto wasn't happy with the game's direction, insisting on a first-person perspective and causing Retro Studios to scrap virtually all of its existing assets. Many developers would have quit right there, but rather than give up, Retro Studios crafted one of the most astonishing adventures to ever appear on Nintendo's diminutive console.



REVISITING METROID PRIME

PRODUCER KENSUKE TANABE ON THE AAA METROID

On creating new mechanics

"During the process of developing *Metroid Prime*, we asked Retro Studios to incorporate a visor system into the game in order to make it clearly new and differentiate it from FPS games."

On Samus' Scan Visor

"We set up the Scan Visor, which was a visor that the player used to scan necessary information, as one of [several] visors. We thought this feature would help users who wanted to know more information about the setting by actively utilising, for example, a Pirate Log."

On environmental scanning

"Because we made it a must to use the Scan Visor to fully complete the game [by setting up the scan rate], some might not have liked it."

On *Metroid Prime*'s difficulty

"These days, such games that a player can complete by just spending time playing without deeply thinking may tend to be welcomed more. From that perspective, *Metroid Prime* can be seen as a very tough game. However, Nintendo's game philosophy is that we hope users feel accomplishment and are impressed by thinking while playing the game. We also want players to feel their skills are improving."

On completing *Metroid Prime*

"As a whole, we did not intend to make it extraordinarily difficult, and even a casual gamer like me could manage to clear the game."

THE MINI-MAKING OF METROID PRIME

MARK PACINI DISCUSSES PRIME IN OUR LEGACY INTERVIEW

What inspired the creation of *Metroid Prime*?
"Our main inspiration, without a doubt, was *Super Metroid*. That's all you need."

Why did you decide to make *Metroid Prime* a first-person adventure?
"When *Metroid Prime* was released, no one else was concentrating on the exploration and platforming elements in a first-person game. We were dubbed as an FPA (first-person adventure), which to us meant that the core gameplay was not about shooting enemies but rather the immersive experience of being Samus and exploring the environment. We were able to differentiate our game by focussing on those aspects, and I think people felt it to be unique."

What development challenges did you face? What goals did you have?
"We also tried to preserve the essence of the *Metroid* experience in its move to 3D. It couldn't just be a 3D game starring Samus: It had to be *Metroid*. That was probably the most difficult part of the whole development process."

Where did the first-person concept come from?
"Mr Miyamoto came to us with the idea of playing a *Metroid* game from the first-person perspective. He felt that the best way to play a 3D game where the character had a gun was from a first-person viewpoint. At first, we were not seeing his vision and we knew the fans would have the same initial reaction. However, as we started down this path, many unique gameplay opportunities came to light and we began to get very excited about the possibilities. If we were excited, *Metroid* fans probably would be as well."

What does Samus' scanner add to the game?
"The main reason for scanning was to give more motivation for the player to look around and explore the environment. It also helped remind the player to use their different visors throughout the game. As the series has continued, the scanning feature has played less of a role, but we still find it is very useful in terms of giving the player hints and information."

Is there anything missing from the final game?
"Probably the one thing I would have loved to include was Kraid as a boss. We had his model completed with some preliminary animations during *Prime*, but the gameplay of the battle was turning out not to be fun and we had to cut it because of time."

What added to the player's sense of immersion in *Metroid Prime*?
"The feature that really helped immerse the player was the absence of loading screens. The player was able to play the entire game without a break in the action."

SAMUS ARAN: READY FOR ACTION

THE ICONIC BOUNTY HUNTER'S KEY POWERS

Arm Cannon

Power Beam

Wave Beam

Ice Beam

Plasma Beam

Missile Launcher

Powered Suit (Varia)

Visor System

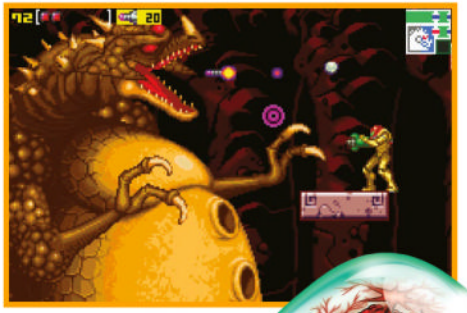
Combat Visor

Scan Visor

Thermal Visor

X-Ray Visor

Morph Ball



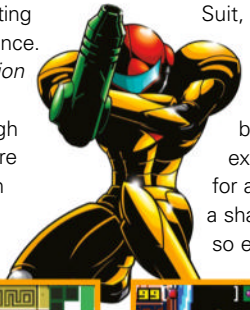
A REMARKABLE REMAKE

METROID: ZERO MISSION

GAME BOY ADVANCE • 2004

Even today, *Zero Mission* remains one of the best remakes on Nintendo hardware, matched only by Capcom's astonishing GameCube update of *Resident Evil*. It's effectively a reimagining of the original NES game rather than an authentic remake, built with the *Metroid Fusion* engine after director Yoshio Sakamoto decided against porting *Super Metroid* to the Game Boy Advance.

While many sections of *Zero Mission* will feel instantly familiar if you've played *Metroid* before, there is enough variance to the stage layouts to ensure that even veterans will find the return to Zebes feels fresh and different. Some aspects of the game have been improved thanks to abilities from later *Metroid*s being retrofitted into the game, but the biggest change comes as you reach *Zero Mission*'s conclusion. Rather than ending with the demise of Mother Brain, *Zero Mission* continues with a brand-new chapter, in which Samus, captured and stripped of her Power Suit, must sneak around with a weedy pistol and fend off a swarm of Space Pirates.



Metroid: Zero Mission might be short, but it remains a fitting example of how to update a classic for a new generation of gamers – what a shame the GBA original is becoming so expensive to own now.

ESSENTIAL REMAKES

MORE NINTENDO UPDATES TO OWN

SUPER MARIO ALL-STARS

SNES, 1993

■ This superb package includes *Super Mario Bros. 1-3*, as well as *The Lost Levels*. In addition to including greatly enhanced visuals and remastered soundtracks each game also has a new save option, while the previously high difficulty in *The Lost Levels* has been rebalanced.

STAR FOX 64 3D

3DS, 2011

■ While this collaboration between Nintendo EAD and Q-Games clearly benefits from overhauled visuals, it's the tremendous 3D effect and gyroscopic controls that really sell *Star Fox 64 3D*. The single-player game feels incredibly immersive, while the new Battle Mode offers additional longevity.

POKÉMON FIRERED/ LEAFGREEN

Game Boy Advance, 2004

■ Game Freak's highly desirable (and expensive) GBA remakes are great updates of the Game Boy originals that sold nearly 12 million units. Both games include improved visuals, useful quality-of-life enhancements and a brand-new area, Sevii Islands, to explore.

THE LEGEND OF ZELDA: MAJORA'S MASK 3D

3DS, 2015

■ After impressing with its 3DS update of *Ocarina Of Time*, Japanese developer Grezzo was let loose on the N64 sequel. It's an equally ambitious remake with excellent quality-of-life improvements, a better framerate than the N64 original, gyroscopic controls and much more.

SAMUS GETS CANCELLED

A BRIEF LOOK AT THE LOST METROID GAMES

■ *Metroid*, like any long-running series, has its share of lost games. *Metroid 64* was mentioned numerous times by Nintendo, but ultimately came to nothing, while a *Metroid* adventure was pitched by Sega in the early 2000s after it left the hardware business. *Metroid Tactics* was a tactical game pitched for Nintendo's Wii, while *MetaForce* was Retro Studios' first attempt at a *Metroid* game. *Metroid 1.5* was a multiplayer-focussed game that led to *Metroid Prime 2: Echoes*, while the cancelled DS game *Project Valkyrie* morphed into *Metroid: Federation Force*.

DOUBLE TROUBLE

METROID PRIME 2: ECHOES

GAMECUBE • 2004

The big draw for Retro Studios' sequel to *Prime* was the addition of a much-touted multiplayer mode. While it's certainly a nice idea, it makes for a rather clunky and unsatisfying experience due to the lock-on system used and the paltry amount of included gameplay modes. In fact, its biggest success is that it proves that the *Metroid Prime* games aren't traditional first-person shooters at all, despite the viewpoint they share.

Luckily, the single-player aspect of *Echoes* is far more enjoyable and sees Samus switching between two parallel dimensions known as Light and Dark Aether. Crossing these dimensions isn't without issue, though, as Samus' health continually deteriorates while she's in contact with Dark Aether, causing her to seek out the small safe zones found there. It adds an additional layer of difficulty to an already tough game, which may be off-putting for some. Adding to Samus' plight is the fact that enemies now come in light and dark forms meaning Samus constantly has to switch between her new Light and Dark beams to destroy them.

It's a real pity that *Echoes* can feel so tough in places, as the actual plot (which continues directly on from *Prime*) is extremely strong, focussing on the Dark Samus created in the closing credits of Samus' previous adventure. Like its predecessor, *Echoes* is a beautiful-looking game, full of wonderfully realised environments, dangerous enemies and gargantuan bosses. It suffers from a few pacing issues compared to *Prime*, but it remains another engrossing adventure, even if the promised multiplayer mechanics never lived up to expectation.

SAMUS RAMPS UP

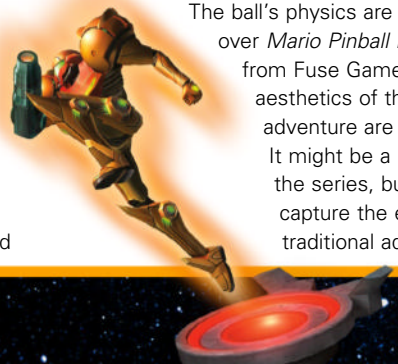
METROID PRIME PINBALL

NINTENDO DS • 2005

A *Metroid* pinball game sounds like a ridiculous concept until you actually play it. While the included GBA Rumble Pak adds plenty to the cost of a second-hand copy (but little to the fun), the handheld's dual screens ensure that you can really appreciate the well-designed tables that Fuse Games has crafted.

As in *Metroid Prime*, the aim in *Pinball* is to acquire 12 Chozo Artifacts, which are spread across four of the six available tables. Each table is based on a specific area of the Tallon Overworld, and is filled with clever ramps and scoring multipliers to exploit. A number of additional minigames are included, while many of *Prime*'s memorable bosses also make an appearance.

The ball's physics are greatly improved over *Mario Pinball Land* (another effort from Fuse Games) while the moody aesthetics of the GameCube adventure are perfectly replicated. It might be a big departure for the series, but it still manages to capture the essence of Samus' traditional adventures.



MULTIPLAYER MAYHEM

METROID PRIME HUNTERS

NINTENDO DS • 2006

***Metroid Prime Hunters* gives you a good indication of what a N64-based *Metroid* might have looked like back in the day.** While it couldn't hope to match the aesthetic brilliance of *Metroid Prime*, it still managed to look mighty impressive on release, showcasing the graphical grunt of Nintendo's new handheld. It's now rather cheap as well. The plot of *Hunters* takes place between *Prime* and *Echoes*, and sees Samus embroiled in a battle with six other bounty hunters to retrieve the "ultimate power" after the Galactic Federation receives a telepathic message. Although it feels more linear than the *Prime* games, it still manages to pack a strong narrative punch.

The multiplayer aspect of *Hunters* is equally enjoyable, with each of the available bounty hunters having unique abilities that make them feel completely different to play. There's a variety of competitive and co-operative modes and 26 different maps to tackle. One of the early showcases of the DS (a demo, *Metroid Prime Hunters: First Hunt*, was a pack-in at launch), *Hunters*' game modes and fast-paced action proved that a *Metroid* multiplayer could work with a little thought. It's a pity, then, that Nintendo's game is rather hampered by its various control systems, which, while capable, never feel completely comfortable over extended play sessions.

IT'S WII-LY GOOD

METROID PRIME 3: CORRUPTION

WII • 2007

***Corruption* was a suitably epic end for Retro Studios' *Prime* trilogy.** As its title suggests, *Corruption*'s gameplay mechanics revolve around Samus becoming corrupted by the events that took place at the end of *Metroid Prime: Echoes*. This corruption comes in the form of the nifty 'Hypermode' that augments Samus' powers at the expense of her health. It's a clever spin on the risk vs reward mechanics of other games, and spurs you on to finish this excellent adventure, which is a strong improvement upon *Echoes*.

The sublime use of the Wii's motion controls is what really makes *Corruption* stand apart from its peers, though. Retro Studios worked on them extensively, which led to *Corruption* receiving several delays, but we'd argue the wait was worth it. They work amazingly well, making you feel like Samus' iconic arm cannon is an extension of your own arm; easily silencing anyone who scoffs at Nintendo's choice of control method. Just like with *The Legend Of Zelda: Skyward Sword*, the motion controls do a tremendous job of enhancing your overall experience, pulling you deeper into the beautifully constructed world that Retro Studios has created.

TRIPLE THREAT

METROID PRIME: TRILOGY

WII • 2009

This entry seems a little like cheating, as it's effectively a collection of all three *Prime* games. It's so much more though as the Wii's brilliant controls for *Corruption* translate perfectly to *Prime* and *Echoes*, greatly improving them in the process. Other enhancements include shorter load times, upgraded textures, bloom lighting and a general graphical upgrade to a pair of already gorgeous-looking games. *Corruption*'s award system is also retrofitted into both titles, while the boss encounters from *Echoes* have been made a lot easier. It's a superb collection of games that now maintains a decent price on auction sites, so be prepared to dig deep. Rather interestingly, both *Metroid Prime* and its sequel were released as separate games in Japan as part of the Wii's *New Play Control!* series. *Metroid Prime: Trilogy* has been rumoured to be hitting Switch for several years now, but it's looking increasingly unlikely. What a shame.

A WII-EL ENHANCEMENT

WHAT MAKES METROID PRIME: TRILOGY SO GOOD?

GREAT CONTROLS

■ Retro Studio's control scheme for *Corruption* works equally brilliantly for its earlier GameCube games. Control of Samus feels even more fluid that it did before, making combat and exploring feel effortless.

IMMERSION

■ Another key aspect of *Metroid Prime: Trilogy* is how much more immersive the games feel. Using Samus' weapons and abilities feels incredibly natural, meaning you can fully envelop yourself in the three games.

GREAT VISUALS

■ *Prime* and *Echoes* both looked fantastic, but they still benefit from being ported over to the Wii. Environments and bosses look better than ever and it feels like a significant upgrade over the GameCube originals.

VALUE FOR MONEY

■ *Metroid Prime: Trilogy* offered exceptional value for money on release and that remains true today. While it's a little pricier than owning all three games separately, it's still worth tracking down.

SULKY SAMUS

METROID: OTHER M

WII • 2010

Samus' Wii adventure is something of a bittersweet one. While it delivers the greatest action to appear in the series to date, it also turns Samus into an extremely unlikable protagonist. Nintendo's heroine has always been tough, and was typically someone who relied more on action than words, but here she's been reduced to a whiny petulant child, unhappy with her lot in life and appears as if she's waltzed out of a bad soap opera. It's a weird tonal misstep for the series and adds little to Samus' character.

Still, if you can ignore the overly dramatic cutscenes and personality transplant, you'll discover *Other M* to be a rollicking adventure that's filled to the brim with some of the best boss fights in the series to date. Melee combat features quite heavily in *Other M*, with Samus having access to a surprising range of moves, which is hardly surprising when you consider Team Ninja was heavily involved in the project. While the vast majority of *Other M*'s gameplay sees Samus exploring the game world from a third-person perspective, turning the Wii Remote to face the screen sees the action switching to first-person, giving you the ability to lock-on to targets and fire missiles. It's a genuinely neat set of mechanics to switch between and makes *Other M* a refreshing take on the series. It's nice and cheap as well.

FORCE OR FARCE?

METROID PRIME: FEDERATION FORCE

3DS • 2016

Every family has a black sheep and *Federation Force* is *Metroid*'s. It's a highly unusual game because not only do you not play as Samus Aran, but everything is told from the perspective of the Galactic Federation's Federation Force. Taking place after the events of *Metroid Prime 3: Corruption*, *Federation Force* shares many similarities mechanically with *Metroid Prime Hunters*, although it lacks that game's touch controls and is fully focussed on co-operative play. Missions are tackled by up to four players and range from capturing monsters to guarding targets, and it's possible to deck out your marine with a number of different weapons, which adds some nice flexibility. When you're done with the missions, you can also dive into

Blast Ball, a fun and frantic sports game. While it's certainly not a traditional *Metroid* game, we've actually warmed to *Federation Force* over the years and feel that it's a solid little action game and it's not too pricey either.

GIVE IT A TRY

THREE REASONS NOT TO OVERLOOK FEDERATION FORCE

ART STYLE

■ The cute chunky style certainly won't appeal to everybody, but we quite like how *Federation Force* looks. It's styled to appeal to younger gamers but the gameplay itself is challenging.

FAMILIARITY

■ There are plenty of nods to *Metroid* lore throughout *Federation Force*. It may feature new enemies, but plenty of classic foes return and it's fun taking them down with friends.

BLAST BALL

■ It certainly won't give the mighty *Speedball* many sleepless nights, but Blast Ball remains an extremely entertaining diversion once you're done with all of *Federation Force*'s main missions.

A RETURN TO FORM

METROID: SAMUS RETURNS

3DS • 2017

After proving its mettle with a reboot of *Castlevania,* MercurySteam found itself working on another coveted Japanese series. *Samus Returns* is a remake of *Metroid II: Return Of Samus* and as you'd expect it's a genuinely significant upgrade over the original game that improves it in a variety of ways for modern audiences.

Graphically, *Samus Returns* looks great, with brilliantly crafted environments, some excellent-looking enemies and fantastic boss encounters. Equally impressive is the atmospheric soundtrack that really enhances the game's moody look. In terms of mechanics, things have also been greatly improved with Samus now having full 360° control over her arm cannon. The bounty hunter is able to fast travel between areas and has a nifty new laser for targeting enemies. You can see influences from *Other M* as well, as there's more close-quarters combat and MercurySteam has added a somewhat divisive parry mechanic. Another big improvement over the original Game Boy game are Aeion abilities that can augment Samus in numerous ways like slowing down time or increasing the range of melee counters. It's an excellent update.

NOTHING TO FEAR HERE

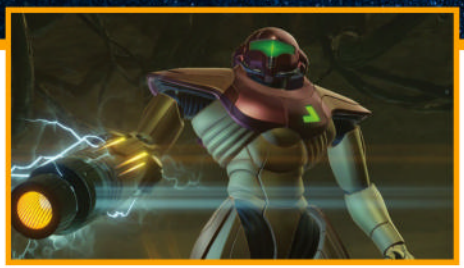
METROID DREAD

SWITCH • 2021

Yoshio Sakamoto was always keen to revisit the simple stealth mechanics found in *Metroid Fusion* but could never find the right fit. After trying for years (the DNA of *Dread* goes back as far as 2005 and Nintendo's DS handheld) he finally cracked it with the help of MercurySteam.

Metroid Dread sees the tables turned once again on Samus Aran as she's sporadically hunted down by dangerous EMMI robots that can kill her upon contact if she's not careful. Needless to say there's a real tension to exploring the planet ZDR, with Samus having to reduce the sound she makes, rely on her new camouflage and Aeion abilities and generally do what she can to slip past the menacing metallic guardians.

In a neat twist, Samus needs to defeat these new foes in order to receive upgrades and they all provide a stiff challenge. In fact, *Metroid Dread* is probably one of the hardest games in the series, but it's also one of the most rewarding with dramatic boss fights, a great sense of exploration and excellent visuals. Don't miss it.



A PRIME REMASTER

METROID PRIME REMASTERED

SWITCH • 2023

Talk of a Switch remaster of *Metroid Prime: Trilogy* has been haunting the internet for years now. While the mythical unicorn hasn't yet materialised, we were treated to an excellent update of *Metroid Prime* that was stealth dropped the day it was announced early in 2023. Based on the version from *Metroid Prime: Trilogy* and created in collaboration with Retro Studios and various other developers, it's an excellent update that effortlessly modernises the game with quality-of-life options like dual-stick controls and better loading times. The original game was one of the most impressive-looking releases on the GameCube and its remaster looks similarly striking in high definition, with only a few oddities like doors lacking definition. In fact the only criticism that's really been levelled at the new remaster is that the original team members aren't properly credited. It's unclear if the two sequels will ever appear, but *Remastered* is currently the best way to enjoy Samus' greatest 3D adventure.

THE WAITING GAME

METROID PRIME 4

SWITCH • TBC

The original *Metroid Prime* faced all sorts of difficulties during its gestation period and it would appear that the fourth game in the series is facing similar problems. Originally announced during a Nintendo Direct presentation in 2017, Eurogamer revealed that both Bandai Namco Singapore and Japan were working on the project. While Nintendo never confirmed this, a video released early in 2019 revealed that Retro Studios was now working on the project under the supervision of Kensuke Tanabe owing to the original planned game not reaching Nintendo's exacting standards. News has been scarce since then, but we wouldn't be surprised if this one ends up being a launch game for the incoming Switch 2, as well as Nintendo's final Switch game.

FURTHER ADVENTURES

IF YOU LIKE THE METROID SERIES YOU'LL LOVE THESE

WONDER BOY III: THE DRAGON'S TRAP

■ This delightful Master System game sees hero Wonder Boy getting transformed into a cute dragon during the game's dramatic opening. As the game progresses he turns into a variety of animals, which in turn slowly opens up the huge game world.

CASTLEVANIA: SYMPHONY OF THE NIGHT

■ *Symphony Of The Night* was a huge risk for Konami, as it deviated from both the familiar *Castlevania* template and was a 2D game released into a world that was obsessed with 3D. The gamble paid off and numerous sequels followed its formula.

CAVE STORY

■ This freeware PC game took five years to create, being crafted by Daisuke "Pixel" Amaya in his spare time. It's a delightful game with tight controls, beautiful pixel art and some very inventive level design. Grab the 3DS version if you can find it for a good price.

SHADOW COMPLEX

■ This stunning effort from ChAIR utilises the popular 2.5D format to tell the over-the-top adventures of Jason Fleming as he searches for his missing girlfriend. While it maintains the exploration elements of the *Metroid* series, there's a far bigger emphasis on causing mayhem here.

GUACAMELEE!

■ *Guacamelee!* is a superb Metroidvania that follows the exploits of the humble farmer Juan Aguacate on his mission to save El Presidente's Daughter from the nefarious Carlos Calaca. Its vibrant visuals and creative Mexican theme sets it apart from similar games and it received a superb sequel in 2018.

PRINCE OF PERSIA: THE LOST CROWN

■ Metroidvanias are everywhere nowadays, but this recent adventure is one of our favourites. It not only takes Ubisoft's long-running franchise in exciting new directions, but also reinvigorates Metroidvanias as well. Do not miss it.

retro GAMER

THE MINI

METROID

COMPANION